STIC Search Report
EIC 2600

STIC Database Tracking Number: 203627

TO: Brian Le
Location: Knox 9A61
Art Unit: 2624
Tuesday, October 10, 2006

Case Serial Number: 10633158

From: Pamela Reynolds
Location: EIC 2600
KNOX 8B54
Phone: 571-272-3505

Pamela.Reynolds@uspto.gov

Search Notes

Dear Brian Le,

Please find attached the search results for 10633158. I used the search strategy I emailed to you to edit, not hearing from you I proceeded. I searched the standard Dialog files, IEEE, and the internet.

If you would like a re-focus please let me know.

Thank you.

Pam

RUSH SPE SIGNATURE _____ Access DB# 203627

SEARCH REQUEST FORM

Scientific and Technical Information Center

EIC 2600

Requester's Full Name Brian G Examiner # 79178 Date 10-5-06
Art Unit 2624 Phone Number _____ Serial Number 10633158
Office Location _____ Format preferred (circle) PAPER EMAIL BOTH

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Let us know what you already have and so do not need. Include the keywords, synonyms and meaning of acronyms. Define all terms that may have a specific meaning. Please attach a copy of the background, abstract, claims and other pertinent information.
Please state how the terms or keyword strings should relate to one another.

Title of the Invention _____
Inventor(s)

_____

_____

Earliest Priority date to be used _____

Needs

claims 1+7

Compression
estimat. calc
→ Block coefficients
DCT

DCT not zero

Average
Run
Histogram

run(s)length → size
level #1 in histogram

****

STAFF USE ONLY

Searcher Pamela Reynolds
Phone 2-3505
Location Knox 8B59 1230
Date picked up 10-06-06
Date completed 10-10-06 12am
Search Prep/review _____
Online Time _____

TYPE of Search

Text ✓
Litigation ____
Other ____

Databases Searched

Dialog	✓
STN	
QuestelOrbit	
LEXIS/NEXIS	
Courtlink	✓
Other	

File 9:Business & Industry(R) Jul/1994-2006/Oct 09
(c) 2006 The Gale Group
File 15:ABI/Inform(R) 1971-2006/Oct 09
(c) 2006 ProQuest Info&Learning
File 16:Gale Group PROMT(R) 1990-2006/Oct 09
(c) 2006 The Gale Group
File 20:Dialog Global Reporter 1997-2006/Oct 10
(c) 2006 Dialog
File 47:Gale Group Magazine DB(TM) 1959-2006/Oct 09
(c) 2006 The Gale group
File 75:TGG Management Contents(R) 86-2006/Oct W1
(c) 2006 The Gale Group
File 80:TGG Aerospace/Def.Mkts(R) 1982-2006/Oct 09
(c) 2006 The Gale Group
File 88:Gale Group Business A.R.T.S. 1976-2006/Oct 09
(c) 2006 The Gale Group
File 98:General Sci Abs 1984-2006/Oct
(c) 2006 The HW Wilson Co.
File 112:UBM Industry News 1998-2004/Jan 27
(c) 2004 United Business Media
File 141:Readers Guide 1983-2006/Aug
(c) 2006 The HW Wilson Co
File 148:Gale Group Trade & Industry DB 1976-2006/Oct 10
(c)2006 The Gale Group
File 160:Gale Group PROMT(R) 1972-1989
(c) 1999 The Gale Group
File 275:Gale Group Computer DB(TM) 1983-2006/Oct 09
(c) 2006 The Gale Group
File 264:DIALOG Defense Newsletters 1989-2006/Oct 09
(c) 2006 Dialog
File 369:New Scientist 1994-2006/Aug W2
(c) 2006 Reed Business Information Ltd.
File 370:Science 1996-1999/Jul W3
(c) 1999 AAAS
File 484:Periodical Abs Plustext 1986-2006/Oct W1
(c) 2006 ProQuest
File 553:Wilson Bus. Abs. 1982-2006/Oct
(c) 2006 The HW Wilson Co
File 570:Gale Group MARS(R) 1984-2006/Oct 09
(c) 2006 The Gale Group
File 608:KR/T Bus.News. 1992-2006/Oct 10
(c)2006 Knight Ridder/Tribune Bus News
File 620:EIU:Viewswire 2006/Oct 09
(c) 2006 Economist Intelligence Unit
File 613:PR Newswire 1999-2006/Oct 10
(c) 2006 PR Newswire Association Inc
File 621:Gale Group New Prod.Annou.(R) 1985-2006/Oct 09
(c) 2006 The Gale Group
File 623:Business Week 1985-2006/Oct 10
(c) 2006 The McGraw-Hill Companies Inc
File 624:McGraw-Hill Publications 1985-2006/Oct 10
(c) 2006 McGraw-Hill Co. Inc
File 634:San Jose Mercury Jun 1985-2006/Oct 06
(c) 2006 San Jose Mercury News
File 635:Business Dateline(R) 1985-2006/Oct 07
(c) 2006 ProQuest Info&Learning
File 636:Gale Group Newsletter DB(TM) 1987-2006/Oct 09
(c) 2006 The Gale Group
File 647:CMP Computer Fulltext 1988-2006/Nov W4
(c) 2006 CMP Media, LLC
File 696:DIALOG Telecom. Newsletters 1995-2006/Oct 09

```
         (c) 2006 Dialog
File 674:Computer News Fulltext 1989-2006/Sep W1
         (c) 2006 IDG Communications
File 810:Business Wire 1986-1999/Feb 28
         (c) 1999 Business Wire
File 813:PR Newswire 1987-1999/Apr 30
         (c) 1999 PR Newswire Association Inc
File 587:Jane`s Defense&Aerospace 2006/Oct W1
         (c) 2006 Jane`s Information Group

Set     Items   Description
S1      92374   (ESTIMAT? OR CALCULAT? OR COMPUT?)(3N)(SIZE OR LENGTH)
S2        260   S1(3N)(CODE?? OR CODING)
S3       1801   VARIABLE(3N)LENGTH()(CODE OR BLOCK??) OR VLC
S4      17430   HISTOGRAM??
S5    1336773   BIN OR BINS
S6   21636390   PRODUCTS
S7    7707532   SIZE? OR DIMENSION?
S8    1079885   ZERO
S9       8699   NONZERO
S10      2294   RUN(N3)ZERO
S11       894   REPRESENTATIVE()LEVEL?
S12     72689   AVERAG?(3N)(RUN OR LENGTH)
S13      6483   RLE OR RUN()LENGTH()ENCODING
S14    192995   COEFFICIENT?
S15     26121   HUFFMAN
S16    449939   LOSSLESS OR COMPRESSION
S17     13051   DCT OR DISCRETE()COSINE()TRANSFORM
S18  10645507   IMAGE? OR PICTURE? OR PHOTO OR PHOTOS OR PHOTOGRAPH? OR JP-
           EG OR MPEG
S19        45   AU=(KOSHIBA, O? OR OSAMOTO, A? OR YAMAUCHI, S? OR KOSHIBA -
            O? OR OSAMOTO A? OR YAMAUCHI S?)
S20         0   S19 AND S3
S21         0   S19 AND (S1 OR S2)
S22         1   S2(S)(S3 OR S15)
S23         0   S3(S)S4
S24         0   S3(S)S5
S25        33   S3(S)(S8 OR S10)
S26         0   S25(S)S11
S27         0   S25(S)S12
S28         1   S25(S)S13
S29         1   S28 NOT S22
S30         0   S2(S)S12
S31         1   S3(S)S12
S32         1   S31 NOT (S28 OR S22)
S33     87203   S18(S)S16
S34       394   S33(S)(S3 OR S15)
S35         1   S34(S)(S9 OR S10)
S36         1   S35 NOT (S31 OR S28 OR S22)
S37        23   S34(S)(S12 OR S13)
S38        11   S37(S)S7
S39        11   S38 NOT (S35 OR S31 OR S28 OR S22)
S40        10   S39 NOT PY=>2004
S41         4   RD S40  (unique items)
```

22/3,K/1 (Item 1 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB

10914893 SUPPLIER NUMBER: 54258951 (USE FORMAT 7 OR 9 FOR FULL TEXT)
EDA firms speed up 3G design.(electric design automation; third generation mobile telephone equipment)
Ball, Richard
Electronics Weekly, 1900, 18(2)
March 10, 1999
ISSN: 0013-5224 LANGUAGE: English RECORD TYPE: Fulltext; Abstract
WORD COUNT: 1057 LINE COUNT: 00088

... systems specialist at Synopsys.
Models and configurations cover channel encoding and decoding, rate matching, orthogonal **variable - length code** generation, channel **estimation** , RAKE receivers, accurate propagation channels and receiver front end models.
"We provide the starting blocks...
?

29/3,K/1 (Item 1 from file: 88)
DIALOG(R)File 88:Gale Group Business A.R.T.S.

06115304 SUPPLIER NUMBER: 84547409
An efficient coding algorithm for the compression of ECG signals using the wavelet transform.(electrocardiogram)(Abstract)
Rajoub, Bashar A.
IEEE Transactions on Biomedical Engineering, 49, 4, 355(8)
April, 2002
DOCUMENT TYPE: Abstract ISSN: 0018-9294 LANGUAGE: English
RECORD TYPE: Abstract

...AUTHOR ABSTRACT: coefficients and outputting a binary one if the scanned coefficient is significant, and a binary **zero** if it is insignificant. Compression is achieved by 1) using a **variable length code** based on **run length encoding** to compress the significance map and 2) using direct binary representation for representing the significant ...
?

36/3,K/1 (Item 1 from file: 88)
DIALOG(R)File 88:Gale Group Business A.R.T.S.

06728795 SUPPLIER NUMBER: 115270396
Optimal Huffman coding of DCT blocks.(Author Abstract)
Lakhani, Gopal
IEEE Transactions on Circuits and Systems for Video Technology, 14, 4, 522(6)
April, 2004
DOCUMENT TYPE: Author Abstract ISSN: 1051-8215 LANGUAGE: English
RECORD TYPE: Abstract

...AUTHOR ABSTRACT: runs of zero coefficients increase in length. This paper presents a minor modification to the **Huffman** coding of the **JPEG** baseline **compression** algorithm to exploit this characteristic. During the run-length coding, instead of pairing a **nonzero** ac coefficient with the run-length of the preceding zero coefficients, our encoder pairs it...

...small change makes it possible for our codec to code a pair using a separate **Huffman** code table optimized for the position of the **nonzero** coefficient denoted by the pair. These position-dependent code tables can be encoded efficiently without...

...overhead. Experimental results show that our encoder produces a further reduction in the ac coefficient **Huffman** code size by about 10%-15%.
Index Terms--Discrete cosine transform (DCT), Huffman coding, JPEG...
?

41/3,K/1 (Item 1 from file: 15)
DIALOG(R)File 15:ABI/Inform(R)

00631691 92-46631
Raster Comes of Age
Kirshenberg, Beth M.
CAE v11n8 PP: 40-42 Aug 1992
ISSN: 0733-3536 JRNL CODE: CAE
WORD COUNT: 2691

...TEXT: in compressed form to decrease the required storage for a raster file. Run-length encoding (**RLE**) is a method of storing packets (run-lengths) or "on" or "off" pixels. In some cases, **RLE** compresses an **image** to almost half of the uncompressed file **size** . A CCITT Group 3 or 4 technique compresses and stores the file--compressing the data...

...method also avoids storing redundant information by using a lookup table scheme. The result is **compression** to almost a quarter of the file's uncompressed **size** (CCITT Group 3 is used for fax machines). While CCITT Group 3 or 4 file...

...are compressed in similar ways, the difference is that the Group 3 format follows the **Huffman** Codes (a set of accepted standards in **compression**) to follow the end-of-line markers. CCITT Group 4 format follows the previous line...

41/3,K/2 (Item 1 from file: 47)
DIALOG(R)File 47:Gale Group Magazine DB(TM)

03943421 SUPPLIER NUMBER: 13968733 (USE FORMAT 7 OR 9 FOR FULL TEXT)
How lossy compression shrinks image files. (includes a related article on lossy compression toolkits) (Lab Notes) (Tutorial)
Simon, Barry
PC Magazine, v12, n13, p371(5)
July, 1993
DOCUMENT TYPE: Tutorial ISSN: 0888-8507 LANGUAGE: ENGLISH
RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 4226 LINE COUNT: 00314

... are used for the amplitudes associated with high frequencies.
After quantization, the next step in **JPEG compression** is to use **lossless** methods to reduce the **size** of the data stream of binned values. Since small amplitudes are placed in a bin...

...0 occurs with great frequency in the data stream. Repeated 0 values are compressed using **run length encoding** (**RLE**). Other bin values are compressed with **Huffman** or arithmetic encoding, as described in the Lab Notes column of June 29, 1993.
When...

41/3,K/3 (Item 2 from file: 47)
DIALOG(R)File 47:Gale Group Magazine DB(TM)

03633933 SUPPLIER NUMBER: 11485846 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Looking at the TIFF specification from the inside. (tagged image file

format) (Lab Notes) (Tutorial)
Poor, Alfred
PC Magazine, v10, n21, p371(5)
Dec 17, 1991
DOCUMENT TYPE: Tutorial ISSN: 0888-8507 LANGUAGE: ENGLISH
RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 3203 LINE COUNT: 00237

... Group 4, LZW, or PackBits compression encoding is used.
CCITT Group 3 is a one- **dimensional** modified **Huffman** **run - length encoding** **compression** method that was defined for black-and-white **images** only. In the **Huffman** encoding scheme, the most common values get the shortest codes, and no code is a...

41/3,K/4 (Item 1 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2006 The Gale Group. All rts. reserv.

10316528 SUPPLIER NUMBER: 20874514 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Compression puts images on a diet.(still picture and video compression)
Dipert, Brian
EDN, v43, n13, p71(11)
June 18, 1998
ISSN: 0012-7515 LANGUAGE: English RECORD TYPE: Fulltext; Abstract
WORD COUNT: 7288 LINE COUNT: 00608

... to produce long runs of zeros in the bit stream (Figure 1). Run-length-encoding (**RLE**) **compression** of ac components transforms these long zero strings into more manageable bit lengths. **JPEG** codes the dc coefficient as a difference from the dc coefficient of the previous 8x8 matrix. The final **compression** step uses variable-length **Huffman** or arithmetic **compression** to reduce commonly occurring **RLE** -value-number-pair and dc-difference-coefficient **sizes** .
(Figure 1 ILLUSTRATION OMITTED)
One key JPEG advantage over other lossy compression schemes is that
...
?

Web Results **1** - **10** of about **142,000** for **"texas instruments" zero coefficients**. (**0.27** seconds)

[PDF] JPEG for Digital Panel on the TMS320C5000
File Format: PDF/Adobe Acrobat - View as HTML
First, it run-length encodes the number of **zero coefficients** in a block. ... **Texas Instruments** and its subsidiaries (TI) reserve the right to make changes ...
focus.ti.com/lit/an/spra664/spra664.pdf - Similar pages

[PDF] Video Compression: System Trade-Offs with H.264, VC-1 and other Codecs
File Format: PDF/Adobe Acrobat - View as HTML
cient level followed by runs of **zero coefficients** and a final end of block code after ...
Important Notice: The products and services of **Texas Instruments** ...
focus.ti.com/lit/ml/spry088/spry088.pdf - Similar pages
[More results from focus.ti.com]

[PDF] Implementation of wavelet codec by using **Texas instruments** dsp ...
File Format: PDF/Adobe Acrobat
coefficient results in many **zero**-valued **Coefficients**. Rearranging the subbands in the scanning process leads to a. long string of zeroes. ...
ieeexplore.ieee.org/iel5/7547/20553/00950220.pdf - Similar pages

[PDF] The Predictive Embedded Zerotree Wavelet (PEZW) Coder: Low ...
File Format: PDF/Adobe Acrobat
from **Texas Instruments** to the IS0 JPEG2000 committee, and. has scored well in its evaluation ... large portion of **zero coefficients** with one zerotree root ...
ieeexplore.ieee.org/iel4/6110/16364/00756246.pdf?arnumber=756246 - Similar pages
[More results from ieeexplore.ieee.org]

[Paper] A Custom Designed Image Processing Microcomputer with ...
Using an existing **Texas Instruments** TMS320C40 DSP TIM- 40 standard parallel ... In removing only **zero coefficients** loss-less compression is achieved. ...
www.actapress.com/PDFViewer.aspx?paperId=25494 - Similar pages

C62x Complex FIR (Embedded Target for **Texas Instruments** C6000 DSPs)
The number of FIR filter **coefficients**, which are given as elements of the input vector H, ... **Zero**-valued imaginary parts will be assumed. Algorithm ...
www.mathworks.com/access/helpdesk/help/toolbox/tic6000/c62xcomplexfir.html - 9k - Cached - Similar pages

TI Downloads
Using GraphLink software from **Texas Instruments**, you can download a program from ... a parabola in the form x=Ay^2+By+C. Input consists of the **coefficients**. ...
wps.aw.com/aw_dugopolski_precalculu_1/0,1675,9761-,00.html - 26k - Cached - Similar pages

[PDF] Microsoft PowerPoint - H.264 Tutorial.ppt [Read-Only]
File Format: PDF/Adobe Acrobat - View as HTML
Texas Instruments Developer Conference India ... Levels of the remaining non-**zero coefficients**. ... **zero** residual in each MB. ...
tii.developerconference.ext.ti.com/post-conf/downloads/h.264-tutorial.pdf - Similar pages

The MPEG Standard
JPEG run-length coding produces run-size tokens (run of zeros, non-**zero coefficient** magnitude) whereas MPEG produces fully concatenated run-level tokens ...
bmrc.berkeley.edu/research/mpeg/faq/mpeggeneral.html - 28k - Cached - Similar pages

Abstracts
... the potential to lead to sparser representations by using fewer non-**zero coefficients**. ...
Agilent Technologies, NEC Labs Japan, and **Texas Instruments**. ...
www.stat.colostate.edu/graybillconference/abstracts.htm - 54k - Cached - Similar pages

Gooooooooogle ▶
Result Page: 1 2 3 4 5 6 7 8 9 10 **Next**

"texas instruments" zero coefficients Search

Search within results | Language Tools | Search Tips | Dissatisfied? Help us improve

---

Google Home - Advertising Programs - Business Solutions - About Google

```
File 348:EUROPEAN PATENTS 1978-2006/ 200640
         (c) 2006 European Patent Office
File 349:PCT FULLTEXT 1979-2006/UB=20061005UT=20060928
         (c) 2006 WIPO/Thomson

Set     Items   Description
S1      29011   (ESTIMAT? OR CALCULAT? OR COMPUT?)(3N)(SIZE OR LENGTH)
S2        530   S1(3N)(CODE?? OR CODING)
S3       3287   VARIABLE(3N)LENGTH()(CODE OR BLOCK??) OR VLC
S4      16359   HISTOGRAM??
S5      48369   BIN OR BINS
S6     508562   PRODUCTS
S7    1148519   SIZE? OR DIMENSION?
S8     297017   ZERO
S9       4740   NONZERO
S10      1043   RUN(N3)ZERO
S11       185   REPRESENTATIVE()LEVEL?
S12     16231   AVERAG?(3N)(RUN OR LENGTH)
S13      3078   RLE OR RUN()LENGTH()ENCODING
S14    180784   COEFFICIENT?
S15      4533   HUFFMAN
S16    227967   LOSSLESS OR COMPRESSION
S17      8858   DCT OR DISCRETE()COSINE()TRANSFORM
S18    634618   IMAGE? OR PICTURE? OR PHOTO OR PHOTOS OR PHOTOGRAPH? OR JP-
              EG OR MPEG
S19       136   AU=(KOSHIBA, O? OR OSAMOTO, A? OR YAMAUCHI, S? OR KOSHIBA -
              O? OR OSAMOTO A? OR YAMAUCHI S?)
S20         0   S2(S)S3(S)S4
S21        51   S2(S)S3
S22        12   S21(S)S15
S23         6   S22(S)(S8 OR S10)
S24         6   S23 NOT AD=20030801:20061010/PR
S25         2   S21(S)(S5 OR S6)
S26         2   S25 NOT S24
S27         2   S26 NOT AD=20030801:20061010/PR
S28         0   S19 AND S21
S29         1   S19 AND S4
S30         1   S29 NOT (S24 OR S25)
S31        21   (S15 OR S3)(S)S4(S)(S8 OR S9 OR S10)
S32         1   S31(S)(AVERAG? OR S12)
S33         1   S32 NOT (S29 OR S24 OR S25)
S34         0   S31(S)S13
S35         1   S21(S)S13
S36         0   S35 NOT (S32 OR S29 OR S24 OR S25)
```

24/3,K/1 (Item 1 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

01891697
Improved video coding using adaptive coding of block parameters for coded/uncoded blocks
Verbesserte Videocodieurung unter Verwendung von adaptiven Blockparametern fur codierte/uncodierte Blocke
Codage video ameliore faisant appel a un codage adaptatif de parametres de bloc pour blocs codes/non codes
PATENT ASSIGNEE:
MICROSOFT CORPORATION, (749861), One Microsoft Way, Redmond, Washington 98052-6399, (US), (Applicant designated States: all)
INVENTOR:
Lee, Mingh-Chieh, 5558 166th Place, S.E., Bellevue, WA 98006, (US)
Chen, Wei-ge, 24635 S.E. 37th Street, Issaquah, WA 98029, (US)
LEGAL REPRESENTATIVE:
Hoarton, Lloyd Douglas Charles (80191), Forrester & Boehmert, Pettenkoferstrasse 20-22, 80336 Munchen, (DE)
PATENT (CC, No, Kind, Date): EP 1528813 A1 050504 (Basic)
APPLICATION (CC, No, Date): EP 2004028880 980930;
PRIORITY (CC, No, Date): US 1573 971231
DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI; LU; MC; NL; PT; SE
RELATED PARENT NUMBER(S) - PN (AN):
EP 1156680 (EP 2001116447)
EP 1044566 (EP 2098952010)
INTERNATIONAL PATENT CLASS (V7): H04N-007/36; H04N-007/50
ABSTRACT WORD COUNT: 145
NOTE:
Figure number on first page: 4

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200518	474
SPEC A	(English)	200518	7088
Total word count - document A			7562
Total word count - document B			0
Total word count - documents A + B			7562

...SPECIFICATION an example of entropy coding tables that are used to compute a variable length code (**VLC**). Table 1 is the conventional **VLC** table for intra-type macroblocks, and table 2 is the conventional **VLC** table for inter-type macroblocks. The CBPY bits indicate a one (1) for a coded block, and **zero** (0) for an un-coded block. Note that un-coded blocks are deemed more likely...

24/3,K/2 (Item 2 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

01355444
Improved video coding using adaptive coding of block parameters for coded/uncoded blocks
Verbesserie Videocodieurung unter Verwendung von Adaptiven Blockparametern fur codierte/uncodierte Blocke
Codage video ameliore faisant appel a un codage adaptatif de parametres de

bloc pour blocs codes/non codes
PATENT ASSIGNEE:
MICROSOFT CORPORATION, (749861), One Microsoft Way, Redmond, Washington 98052-6399, (US), (Applicant designated States: all)
INVENTOR:
Lee, Ming-Chieh, 17242 SE 54th Place.E., Bellevue, WA 98006, (US)
Chen, Wei-ge, 24635 S.E. 37th Street, Issaquah, WA 98029, (US)
LEGAL REPRESENTATIVE:
Meddle, Alan Leonard et al (33761), FORRESTER & BOEHMERT, Pettenkoferstrasse 20-22, 80336 Munchen, (DE)
PATENT (CC, No, Kind, Date): EP 1156680 A2 011121 (Basic)
EP 1156680 A3 040526
APPLICATION (CC, No, Date): EP 2001116447 980930;
PRIORITY (CC, No, Date): US 1573 971231
DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI; LU; MC; NL; PT; SE
RELATED PARENT NUMBER(S) - PN (AN):
EP 1044566 (EP 98952010)
RELATED DIVISIONAL NUMBER(S) - PN (AN):
(EP 2004028880)
INTERNATIONAL PATENT CLASS (V7): H04N-007/26; H04N-007/36; H04N-007/50
ABSTRACT WORD COUNT: 106
NOTE:
Figure number on first page: 5

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200147	278
SPEC A	(English)	200147	5831
Total word count - document A			6109
Total word count - document B			0
Total word count - documents A + B			6109

...SPECIFICATION an example of entropy coding tables that are used to compute a variable length code (**VLC**). Table 1 is the conventional **VLC** table for intra-type macroblocks, and table 2 is the conventional **VLC** table for inter-type macroblocks. The CBPY bits indicate a one (1) for a coded block, and **zero** (0) for an un-coded block. Note that un-coded blocks are deemed more likely...

24/3,K/3 (Item 3 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

01065641
IMPROVED VIDEO CODING AND DECODING USING ADAPTIVE CODING OF BLOCK PARAMETERS FOR CODED/UNCODED BLOCKS
VERBESSERTE VIDEOCODIERUNG UND DECODIERUNG UNTER VERWENDUNG VON ADAPTIVEN BLOCKPARAMETERN FUR CODIERTE/UNCODIERTE BLOCKE
CODAGE ET DECODAGE VIDEO AMELIORE FAISANT APPEL A UN CODAGE ADAPTATIF DE PARAMETRES DE BLOC POUR BLOCS CODES/NON CODES
PATENT ASSIGNEE:
MICROSOFT CORPORATION, (749861), One Microsoft Way, Redmond, Washington 98052-6399, (US), (Proprietor designated states: all)
INVENTOR:
LEE, Ming-Chieh, 5558 166th Place, S.E., Bellevue, WA 98006, (US)
CHEN, Wei-ge, 24635 S.E. 37th Street, Issaquah, WA 98029, (US)
LEGAL REPRESENTATIVE:

Meddle, Alan Leonard (33761), FORRESTER & BOEHMERT, Pettenkoferstrasse 20-22, 80336 Munchen, (DE)
PATENT (CC, No, Kind, Date): EP 1044566 A1 001018 (Basic)
EP 1044566 B1 020424
WO 9934603 990708
APPLICATION (CC, No, Date): EP 98952010 980930; WO 98US20573 980930
PRIORITY (CC, No, Date): US 1573 971231
DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI; LU; MC; NL; PT; SE
RELATED DIVISIONAL NUMBER(S) - PN (AN):
EP 1156680 (EP 2001116447)
INTERNATIONAL PATENT CLASS (V7): H04N-007/36; H04N-007/50
NOTE:
No A-document published by EPO
LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	200217	634
CLAIMS B	(German)	200217	592
CLAIMS B	(French)	200217	741
SPEC B	(English)	200217	5890
Total word count - document A			0
Total word count - document B			7857
Total word count - documents A + B			7857

...SPECIFICATION an example of entropy coding tables that are used to compute a variable length code (**VLC**). Table 1 is the conventional **VLC** table for intra-type macroblocks, and table 2 is the conventional **VLC** table for inter-type macroblocks. The CBPY bits indicate a one (1) for a coded block, and **zero** (0) for an un-coded block. Note that un-coded blocks are deemed more likely...

24/3,K/4 (Item 4 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

00983606
Pipeline decoding system
Pipeline-System zur Dekodierung
Systeme pipeline de decodage
PATENT ASSIGNEE:
Discovision Associates, (260275), 2355 Main Street, Suite 200, Irvine, CA 92614, (US), (applicant designated states: AT;BE;CH;DE;FR;GB;IE;IT;LI;NL)
INVENTOR:
Wise, Adrian Philip, 10 Westbourne Cottages, Frenchay, Bristol BS6 1NA, (GB)
Sotheran, Martin William, The Ridings, Wick Lane, Stinchcombe, Dursley, Gloucestershire GL11 6BD, (GB)
Robbins, William Philip, 19 Springhill, CAM, Gloucestershire GL11 5PE, (GB)
Finch, Helen Rosemary, Tyley, Coombe, Wotton-Under-Edge, Gloucestershire GL12 7ND, (GB)
Boyd, Kevin James, 21 Lancashire Road, Bristol BS7 9DL, (GB)
LEGAL REPRESENTATIVE:
Vuillermoz, Bruno et al (72791), Cabinet Laurent & Charras B.P. 32 20, rue Louis Chirpaz, 69131 Ecully Cedex, (FR)
PATENT (CC, No, Kind, Date): EP 891089 A1 990113 (Basic)
APPLICATION (CC, No, Date): EP 98202149 950228;
PRIORITY (CC, No, Date): GB 9405914 940324

DESIGNATED STATES: AT; BE; CH; DE; FR; GB; IE; IT; LI; NL
RELATED PARENT NUMBER(S) - PN (AN):
  EP 674443 (EP 953013018)
INTERNATIONAL PATENT CLASS (V7): H04N-007/24; G06F-019/00; G06F-013/00;
  G06F-009/38;
ABSTRACT WORD COUNT: 165

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:
Available Text Language   Update   Word Count
      CLAIMS A (English) 9902   165
      SPEC A   (English) 9902   127403
Total word count - document A   127568
Total word count - document B   0
Total word count - documents A + B   127568

...SPECIFICATION at the beginning of each encoded video sequence. This
  technique allows the original runs of **zero** coefficients in the highest
  resolution layer to remain intact by forming a sub-block for...
...with an inverse discrete cosine transform applied to square sub-blocks
  obtained by the appropriate **zero** padding of andlor discarding of excess
  coefficients

24/3,K/5 (Item 5 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

00734699
Digital coding/decoding apparatus using variable length codes
Digitale Vorrichtung zum Kodieren/Dekodieren unter Verwendung von Codes mit variablen Lauflangen
Dispositif numerique de codage/decodage pour codes a longueur variables
PATENT ASSIGNEE:
  MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD., (216883), 1006, Oaza-Kadoma,
    Kadoma-shi, Osaka 571-8501, (JP), (Proprietor designated states: all)
INVENTOR:
  Ohara, Kazutake, 4-13-317, Shimohozumi, Ibaraki-shi, Osaka 567, (JP)
LEGAL REPRESENTATIVE:
  Grunecker, Kinkeldey, Stockmair & Schwanhausser Anwaltssozietat (100721)
    , Maximilianstrasse 58, 80538 Munchen, (DE)
PATENT (CC, No, Kind, Date): EP 692913 A2 960117 (Basic)
                              EP 692913 A3 981007
                              EP 692913 B1 011031
APPLICATION (CC, No, Date):   EP 95110949 950712;
PRIORITY (CC, No, Date): JP 94160986 940713
DESIGNATED STATES: DE; FR; NL
INTERNATIONAL PATENT CLASS (V7): H04N-007/30
ABSTRACT WORD COUNT: 120
NOTE:
  Figure number on first page: 2

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:
Available Text Language   Update   Word Count
      CLAIMS A (English) EPAB96   1230
      CLAIMS B (English) 200144   918
      CLAIMS B   (German) 200144   895
      CLAIMS B   (French) 200144   1227
      SPEC A   (English) EPAB96   4449
      SPEC B   (English) 200144   4030

Total word count - document A 5680
Total word count - document B 7070
Total word count - documents A + B 12750

...ABSTRACT a digital coding and decoding apparatus for image data compression and expansion by means of **Huffman** coding, a **Huffman** coding circuit converts a combination of **ZERO RUN** and VALUE into a **variable** -length **code** . A **code length calculation** circuit has an AC code length table for prestoring variable-length codes and their code lengths in corresponding relationship. The **code length calculation** circuit inputs not a ZERORUN-VALUE combination but a **variable - length code** from the **Huffman coding** circuit, thereby **calculating** from the **variable - length code** inputted its **code** length according to the AC code length table. (see image in original document)

24/3,K/6 (Item 1 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00503251 **Image available**
IMPROVED VIDEO CODING USING ADAPTIVE CODING OF BLOCK PARAMETERS FOR CODED/UNCODED BLOCKS
CODAGE VIDEO AMELIORE FAISANT APPEL A UN CODAGE ADAPTATIF DE PARAMETRES DE BLOC POUR BLOCS CODES/NON CODES
Patent Applicant/Assignee:
MICROSOFT CORPORATION,
Inventor(s):
LEE Ming-Chieh,
CHEN Wei-ge,
Patent and Priority Information (Country, Number, Date):
Patent: WO 9934603 A1 19990708
Application: WO 98US20573 19980930 (PCT/WO US9820573)
Priority Application: US 971573 19971231
Designated States:
(Protection type is "patent" unless otherwise stated - for applications prior to 2004)
CA JP AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
Publication Language: English
Fulltext Word Count: 7704
Fulltext Availability:
Detailed Description

Detailed Description
... that are used to compute a variable length code (VLQ. Table 1 is the conventional **VLC** table for intra-type macroblocks, and table 2 is the conventional **VLC** table for inter-type macroblocks. The CBPY bits indicate a one (1) for a coded block, and **zero** (0) for an un-coded block. Note that un-coded blocks are deemed more likely...
?

27/3,K/1 (Item 1 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

00711604
Serial data processing using a pipeline
Verarbeitung serieller Daten mittels einer Pipeline
Traitement de donnees en serie par pipeline
PATENT ASSIGNEE:
DISCOVISION ASSOCIATES, (260273), 2355 Main Street Suite 200, Irvine, CA 92714, (US), (Proprietor designated states: all)
INVENTOR:
Wise, Adrian Philip, 10 Westbourne Cottages, Frenchay, Bristol, BS16 1NA, (GB)
Sotheran, Martin William, The Ridings, Wick Lane, Stinchcombe, Dursley, Gloucestershire, GL11 6BD, (GB)
Robbins, William Philip, 19 Springhill, Cam, Gloucestershire, GL11 5PE, (GB)
LEGAL REPRESENTATIVE:
Vuillermoz, Bruno et al (72791), Cabinet Laurent & Charras B.P. 32 20, rue Louis Chirpaz, 69131 Ecully Cedex, (FR)
PATENT (CC, No, Kind, Date): EP 674442 A2 950927 (Basic)
EP 674442 A3 960814
EP 674442 B1 010214
APPLICATION (CC, No, Date): EP 95301299 950310;
PRIORITY (CC, No, Date): GB 9405914 940324
DESIGNATED STATES: AT; BE; CH; DE; FR; GB; IE; IT; LI; NL
INTERNATIONAL PATENT CLASS (V7): H04N-007/24; G06F-019/00; G06F-009/38
ABSTRACT WORD COUNT: 125
NOTE:
Figure number on first page: 58

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:
Available Text Language Update Word Count
CLAIMS B (English) 200107 1004
CLAIMS B (German) 200107 995
CLAIMS B (French) 200107 1110
SPEC B (English) 200107 121334
Total word count - document A 0
Total word count - document B 124443
Total word count - documents A + B 124443

...SPECIFICATION field associated with them. This field indicates how much data is associated with this marker **code** . **Length** counts of 0 and 1 are illegal. An illegal length should only occur following a... non(underscore)aligned(underscore)start(underscore)mask = 0 is recommended to ensure compatibility with future **products** .
MPEG, on the other hand, was designed to meet the needs of both communications (bit...

27/3,K/2 (Item 1 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00909145 **Image available**
PLANAR LASER ILLUMINATION AND IMAGING (PLIIM) SYSTEMS WITH INTEGRATED DESPECKLING MECHANISMS PROVIDED THEREIN
SYSTEMES PLIIM D'ILLUMINATION ET D'IMAGERIE AU LASER PLANAIRE A MECANISME

DE DECHATOIEMENT INTEGRE

Patent Applicant/Assignee:
METROLOGIC INSTRUMENTS INC, 90 Coles Road, Blackwood, NJ 08012, US, US (Residence), US (Nationality), (For all designated states except: US)

Patent Applicant/Inventor:
TSIKOS Constantine J, 65 Woodstone Drive, Voorhees, NJ 08043-4749, US, US (Residence), US (Nationality), (Designated only for: US)
KNOWLES Carl Harry, 425 East Linden Street, Morrestown, NJ 08057, US, US (Residence), US (Nationality), (Designated only for: US)
ZHU Xiaoxun, 669 Barton Run Boulevard, Marlton, NJ 08053, US, US (Residence), CN (Nationality), (Designated only for: US)
SCHNEE Michael D, 41 Penns Court, Aston, PA 191014, US, US (Residence), US (Nationality), (Designated only for: US)
AU Ka Man, 1224 Devereaux Avenue, Philadelphia, PA 19111, US, US (Residence), US (Nationality), (Designated only for: US)
WIRTH Allan, 358 Concord Road, Bedford, MA 01730, US, US (Residence), US (Nationality), (Designated only for: US)
GOOD Timothy A, 2041 Broad Acres Drive, Clementon, NJ 08021, US, US (Residence), US (Nationality), (Designated only for: US)
JANKEVICS Andrew J, 80R Carlisle Road, Westford, MA 01886, US, US (Residence), US (Nationality), (Designated only for: US)
GHOSH Sankar, Apartment #B27, 100 W. Oadk Lane, Glenolden, PA 19036, US, US (Residence), US (Nationality), (Designated only for: US)
NAYLOR Charles A, 486 Center Street, Sewell, NJ 08080, US, US (Residence), US (Nationality), (Designated only for: US)
AMUNDSEN Thomas, 620 Glen Court, Turnersville, NJ 08012, US, US (Residence), US (Nationality), (Designated only for: US)
BLAKE Robert, 762 Fairview Avenue, Woodbury Heights, NJ 08097, US, US (Residence), US (Nationality), (Designated only for: US)
SVEDAS William, 515 Longwood Avenue, Deptford, NJ 08096, US, US (Residence), US (Nationality), (Designated only for: US)
DEFONEY Shawn, 331 Fay Ann Court, Runnemede, NJ 08078, US, US (Residence), US (Nationality), (Designated only for: US)
SKYPALA Edward, 1501 Old Blackhorse Pike, Suite 0-2, Blackwood, NJ 08012, US, US (Residence), US (Nationality), (Designated only for: US)
VATAN Pirooz, 5122 Lexington Ridge Drive, Lexington, MA 02421, US, US (Residence), US (Nationality), (Designated only for: US)
DOBBS Russell Joseph, 4 Grass Road, Cherry Hill, NJ 08034, US, US (Residence), US (Nationality), (Designated only for: US)
KOLIS George, 5037 Jackson Avenue, Pennsauken, NJ 08110, US, US (Residence), US (Nationality), (Designated only for: US)
SCHMIDT Mark C, 1659 Woodland Drive, Williamstown, NJ 08094, US, US (Residence), US (Nationality), (Designated only for: US)
YORSZ Jeffrey, 24 Fells Road, Winchester, MA 01890, US, US (Residence), US (Nationality), (Designated only for: US)
GIORDANO Patrick A, 1501 Little Gloucester Road, Apartment #U-40, Blackwood, NJ 08012, US, US (Residence), US (Nationality), (Designated only for: US)
COLAVITO Stephen J, 3520 Edgewater Lane, Brookhaven, PA 19015-2607, US, US (Residence), US (Nationality), (Designated only for: US)
WILZ David W Sr, 10 Orion Way, Sewell, NJ 08080, US, US (Residence), US (Nationality), (Designated only for: US)
SCHWARTZ Barry E, 407 Farwood Road, Haddonfield, NJ 08033, US, US (Residence), US (Nationality), (Designated only for: US)
KIM Steve Y, 129 Franklin Street, #113, Cambridge, MA 02139, US, US (Residence), US (Nationality), (Designated only for: US)
FISCHER Dale, 204 Sunshire Lakes Drive, Voorhees, NJ 08043, US, US (Residence), US (Nationality), (Designated only for: US)
VAN Tassel John E Jr, 8 Arbor Lane, Winchester, MA 01890, US, US (Residence), US (Nationality), (Designated only for: US)

Legal Representative:

PERKOWSKI Thomas J (et al) (agent), Thomas J. Perkowski, Esq., P.C., Soundview Plaza, 1266 East Main Street, Stamford, CT 06902, US,
Patent and Priority Information (Country, Number, Date):
Patent: WO 200243195 A2-A3 20020530 (WO 0243195)
Application: WO 2001US44011 20011121 (PCT/WO US0144011)
Priority Application: US 2000721885 20001124; US 2001780027 20010209; US 2001781665 20010212; US 2001883130 20010615; US 2001954477 20010917; US 2001999687 20011031
Parent Application/Grant:
Related by Continuation to: US 2001954477 20010917 (CIP)
Designated States:
(Protection type is "patent" unless otherwise stated - for applications prior to 2004)
AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 298301

Fulltext Availability:
Claims

Claim
... imaging bar coded packages transported therebeneath and decode processing these images to read such bar **code** symbols in a fully automated manner;
Fig. 25 is a schematic block diagram illustrating the...that are processed in order to determine the shape/geometry, dimensions and color of such **products** in diverse retail shopping environments;
Fig. 33B is a schematic representation of the bioptical PLUM...that are processed in order to determine the shape/geometry, dimensions and color of such **products** in diverse retail shopping environments;
Fig. 34B is a schematic representation of the bioptical PLUM...
?

30/3,K/1 (Item 1 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

01295167
Digital camera system and method
Digitales Kamerasystem und Verfahren
Systeme et procede de camera numerique
PATENT ASSIGNEE:
Texas Instruments Incorporated, (279078), 7839 Churchill Way, Mail Station 3999, Dallas, Texas 75251, (US), (Applicant designated States: all)
INVENTOR:
Hung, Ching-Yu, 4633 Baldwin lane, Plano, Texas 75024, (US)
Tamama, Hideo, Matsushiro 4-9-10, Tsukuba, Ibaraki, (JP)
Osamoto, Akira , Koda 972-2, Inashiki, Ibaraki, (JP)
Koshiba, Osamu , 3-11-2-402 Koyadai, Tsukuba, Ibaraki, (JP)
Yamauchi, Satoru , 1022-17 Otto, Tsuchiura, Ibaraki, (JP)
Zhou, Minhua, 2523 Ohio drive No. 108, Plano, Texas 75093, (US)
Ilgner, Klaus, Marquartsteiner Strasse 12, 81549 Munchen, (DE)
Talluri, Rajendra, 2220 Fountain Head Drive, Plano, 75203, (US)
Yoo, Youngjun, 800 West Renner Road, No. 1418, Richardson, Texas 75080, (US)
Liang, Jie, 2505 Frosted Green Lane, Plano, Texas 75025, (US)
Tsai, Mandy, 4F, 72, Hua Lin Street, Taipei 111, (KR)
Tsunoda, Kiyoshi, Shinoharadaimachi 36-33, Kouhoku-ku, Tokohama-city, Kanagawa, (JP)
Inamori, Shinri, 2-18-22-404 Jamariya-Higashi, Kanazawa-ku, Yokohama-shi, Kanagawa, (JP)
LEGAL REPRESENTATIVE:
Potter, Julian Mark et al (80064), D Young & Co 120 Holborn, London EC1N 2DY, (GB)
PATENT (CC, No, Kind, Date): EP 1111904 A2 010627 (Basic)
EP 1111904 A8 010816
EP 1111904 A3 050316
APPLICATION (CC, No, Date): EP 2000311430 001220;
PRIORITY (CC, No, Date): US 172780 P 991220; US 215000 P 000629; US 214951 P 000629; US 632543 P 000804; US 176272 P 000114
DESIGNATED STATES: AT
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
INTERNATIONAL PATENT CLASS (V7): H04N-001/40
ABSTRACT WORD COUNT: 46
NOTE:
Figure number on first page: 1A

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200126	1703
SPEC A	(English)	200126	22464
Total word count - document A			24167
Total word count - document B			0
Total word count - documents A + B			24167

INVENTOR:
... JP)
Osamoto, Akira ...

...JP)
Koshiba, Osamu ...

...JP)
Yamauchi, Satoru ...

...SPECIFICATION bright environment typically has high brightness levels. Tone-scaling commonly relies on luminance (or color) **histogram** equalization as illustrated in block form by Figure 43. Indeed, converter block 430 converts the the input level and the corresponding output level with the output levels calculated in **histogram** equalization block 432 as follows. First, find the cumulative distribution function of the input luminance...

...despite unnaturalness.
The preferred embodiments provide tone-scaling by using a linear combination of the **histogram** equalization function T(r) and the original image level r. That is, for a parameter...

...r.
Figure 44 shows preferred embodiment tone-scaling in functional block form: again define a **histogram** equalization function T() for the luminance (or color) levels in block 442, and then define...
?

33/3,K/1 (Item 1 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00448336 **Image available**
DIGITAL SIGNAL COMPRESSION ENCODING WITH IMPROVED QUANTISATION
CODAGE DE COMPRESSION DE SIGNAUX NUMERIQUES A QUANTIFICATION AMELIOREE
Patent Applicant/Assignee:
BRITISH BROADCASTING CORPORATION,
SNELL & WILCOX LIMITED,
WERNER Oliver Hartwig,
WELLS Nicholas Dominic,
KNEE Michael James,
Inventor(s):
WERNER Oliver Hartwig,
WELLS Nicholas Dominic,
KNEE Michael James,
Patent and Priority Information (Country, Number, Date):
Patent: WO 9838800 A1 19980903
Application: WO 98GB582 19980225 (PCT/WO GB9800582)
Priority Application: GB 973834 19970225; GB 973831 19970225
Designated States:
(Protection type is "patent" unless otherwise stated - for applications prior to 2004)
AU CA JP US AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE
Publication Language: English
Fulltext Word Count: 19999

Fulltext Availability:
Claims

Claim
... by counting for each dct-frequency index i the relative frequency 2 0 of the **zero** -amplitude y = Qi(x) = 0. Interestingly, eq. (32) shows that the impact of the quantisation parameters Xi on the resulting bit rate H only consists in controlling the **zero** -amplitude probabilities Poj. b) from a **histogram** of the original dct-coefficients, resulting with Eqns. 2 5 (10), (13) and (14) in...

...and evaluating
Eqn. (16). b) by calculating D = E [(x - Y)2] directly from a **histogram** of the original dct-coefficients x.
Depending on which options are chosen for Step 1...

...value close to one for low-frequency indices i but a small value, e.g. **zero** , for highfrequency indices.
A distortion-rate optimised quantisation method for MPEG-2 compatible coding has...The DCT coefficients are taken to a linear quantizer 52 providing the
input to a **histogram** building unit 54. The **histogram** is thus based on linearly quantized versions of the input DCT coefficients. The level spacing quantizer 52 is not critical but should probably be about the same as
the **average** value of q. The extent of the **histogram** function required depends on the complexity of the parametric representation of the pdf; in the...

...may be sufficient to calculate the mean or variance of the coefficients, while in the ' **zero** excluded' Laplacian used in the Paper it is sufficient to calculate the mean and the proportion of **zero** values.

This **histogram** , which may be built up over a picture period or longer, is used in block...

...likely case described above,
it is sufficient to compare the value with the innermost non- **zero** 5 reconstruction level. The final input required to calculate @. is the quantizer scale.
In general...
...process. The values of CO,..., CL can be determined in advance by designing a single **variable length code** , ie. a **Huffman** code, for a set of training signals and bit rates. In principle, they can also be obtained directly from the MPEG2 **variable - length code** table. The
only complication is the fact that MPEG2 variable-length coding is based on combinations of runs of **zero** coefficients terminated by non- **zero** coefficients.
One solution to this problem is to estimate'equivalent codeword lengths'from the MPEG2 **VLC** tables. This can be done quite easily if one makes the assumption that the probability...distortion is considered for each coefficient.
Here, we make use of the fact that the **variable - length code** (VILC) table used for a given picture in MPEG2 is fixed and known. This should
...
?

```
File 344:Chinese Patents Abs Jan 1985-2006/Jan
         (c) 2006 European Patent Office
File 347:JAPIO Dec 1976-2006/Jan(Updated 061009)
         (c) 2006 JPO & JAPIO
File 350:Derwent WPIX 1963-2006/UD=200664
         (c) 2006 The Thomson Corporation

Set     Items   Description
S1      17104   (ESTIMAT? OR CALCULAT? OR COMPUT?)(3N)(SIZE OR LENGTH)
S2        315   S1(3N)(CODE?? OR CODING)
S3       2224   VARIABLE(3N)LENGTH()(CODE OR BLOCK??) OR VLC
S4       8616   HISTOGRAM??
S5      30289   BIN OR BINS
S6     513827   PRODUCTS
S7    1754263   SIZE? OR DIMENSION?
S8     199873   ZERO
S9        744   NONZERO
S10       316   RUN(N3)ZERO
S11        41   REPRESENTATIVE()LEVEL?
S12      9097   AVERAG?(3N)(RUN OR LENGTH)
S13       546   RLE OR RUN()LENGTH()ENCODING
S14    227842   COEFFICIENT?
S15      1818   HUFFMAN
S16    284571   LOSSLESS OR COMPRESSION
S17      5811   DCT OR DISCRETE()COSINE()TRANSFORM
S18   2033801   IMAGE? OR PICTURE? OR PHOTO OR PHOTOS OR PHOTOGRAPH? OR JP-
            EG OR MPEG
S19      3423   AU=(KOSHIBA, O? OR OSAMOTO, A? OR YAMAUCHI, S? OR KOSHIBA -
             O? OR OSAMOTO A? OR YAMAUCHI S?)
S20        63   S2 AND S3
S21         1   S20 AND (S4 OR S5 OR S6)
S22         1   S19 AND S20
S23         0   S22 NOT S21
S24         1   S4 AND S9
S25         1   S24 NOT S21
S26       190   S4 AND (S8 OR S10)
S27         1   S26 AND S12
S28         0   S27 NOT (S21 OR S22 OR S24)
S29        16   S26 AND S13:S17
S30         1   S29 AND S11
S31         0   S30 NOT (S21 OR S22 OR S24)
S32        15   S29 NOT AD=20030801:20061010/PR
S33         5   S32 AND IC=G06K?
S34       121   (S3 OR S15) AND S1
S35         1   S34 AND S11
S36         0   S35 NOT (S21 OR S22 OR S24)
S37        10   S34 AND (S8 OR S10)
S38         1   S37 AND AVERAG?
S39         0   S38 NOT (S21 OR S22 OR S24)
S40         9   S37 NOT (S21 OR S22 OR S24)
S41         9   S40 NOT AD=20030801:20061010/PR
S42     34668   S18 AND S16
S43       320   S42 AND S3
S44         0   S43 AND S4
S45         0   S43 AND S5
S46         4   S43 AND S12
S47         4   S46 NOT (S37 OR S21 OR S22 OR S24)
S48         4   S47 NOT AD=20030801:20061010/PR
S49        31   S43 AND (S8 OR S10)
S50         3   S49 AND (S12 OR S13)
S51         2   S50 NOT (S46 OR S37 OR S21 OR S22 OR S24)
```

21/3,K/1 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX

0014831720 - Drawing available
WPI ACC NO: 2005-179410/
XRPX Acc No: N2005-149455
Variable length code size estimating **method for digital still camera, involves estimating size as sum of terms, where each term is product of number of coefficients and code size for average of zero-valued coefficients**
Patent Assignee: KOSHIBA O (KOSH-I); OSAMOTO A (OSAM-I); YAMAUCHI S (YAMA-I)
Inventor: KOSHIBA O; OSAMOTO A; YAMAUCHI S
Patent Family (1 patents, 1 countries)

Patent			Application			
Number	Kind	Date	Number	Kind	Date	Update
US 20050025370	A1	20050203	US 2003633158	A	20030801	200519 B

Priority Applications (no., kind, date): US 2003633158 A 20030801

Patent Details

Number	Kind	Lan	Pg	Dwg	Filing Notes
US 20050025370	A1	EN	8	4	

Variable length code size estimating **method for digital still camera, involves estimating size as sum of terms, where each term...**

Alerting Abstract ...NOVELTY - The method involves providing a block of quantized coefficients. A **histogram** of magnitudes of non-zero ones of the coefficients is formed. A **code size** is **estimated** for the block of coefficients as a sum of terms. Each term is a product of the number of the coefficients in a **bin** of the **histogram** and a code size of a **variable length code** for an average of zero-valued coefficients with a level for the **bin** . USE - Used in a digital still camera for **estimating** a **code size** of a **variable length code** for digital image processing e.g. JPEG, MPEG and DV...

...ADVANTAGE - The method accurately **estimates** the **code size** of the **variable length code** , and provides low complexity **estimates** of the **code size** of the **variable length code** . The method provides more efficient quantization without time delay of actual code generation...

Original Publication Data by Authority

Original Abstracts:
Estimation of the **code size** of variable length encoding of quantized DCT coefficients by summation over **histogram bins** of **products** of number of **bin** members and a code size of an average run of zero coefficients coupled with a representative level from the **bin** . The estimation provides low-complexity feedback for quantization level adjustment to obtain **variable length code** size target without actual performance of a quantization level plus variable length encoding.
Claims:
What is claimed is: b 1 /b . A method of **estimating** the **size** of **variable - length code** , comprising: (a) providing a block of quantized coefficients; (b) forming a **histogram** of magnitudes of non-zero ones of said quantized coefficients; (c) **estimating** a **code size** for said block of quantized coefficients as a sum of one or more terms where...

25/3,K/1 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX

0015331515 - Drawing available
WPI ACC NO: 2005-681767/200570
XRPX Acc No: N2005-559118
Method of detecting moving vehicle
Patent Assignee: AS RUSSIA CHERP RES COORD CENTRE (ARUS-R)
Inventor: EREMIN S N; MALYGIN L L; TSAREV V A
Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update
RU 2262661	C2	20051020	RU 2000116958	A	20000626	200570 B

Priority Applications (no., kind, date): RU 2000116958 A 20000626

Patent Details

Number	Kind	Lan	Pg	Dwg	Filing Notes
RU 2262661	C2	RU		1	

...the formula proposed, the difference between the current frame and background is determined, and brightness **histogram** is obtained throughout the image. After smoothing, a maximum is determined in the first half brightness **histogram** , and the mean of the series of nondecreasing **nonzero** brightness values in the direction of brightness decrease is adopted as the threshold for binarization...

?

33/3,K/1 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX

0014593817 - Drawing available
WPI ACC NO: 2004-775782/
XRPX Acc No: N2004-611136
Compressing method of series of digital images for medical diagnosis, involves adjusting pixel value for pixels of each of subtracted image set having absolute values of less than predetermined threshold value, to zero
Patent Assignee: SUMTOTAL LLC (SUMT-N)
Inventor: RAMANATHAN S; RAMANATHAN V; STOFFER J
Patent Family (1 patents, 106 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update
WO 2004093001	A1	20041028	WO 2004US10987	A	20040409	200476 B

Priority Applications (no., kind, date): US 2003461821 P 20030411

Patent Details

Number	Kind	Lan	Pg	Dwg	Filing Notes
WO 2004093001	A1	EN	27	2	

National Designated States,Original: AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NA NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW
Regional Designated States,Original: AT BE BG BW CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PL PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW

...each of subtracted image set having absolute values of less than predetermined threshold value, to zero

Original Titles:
ADAPTIVE SUBTRACTION IMAGE **COMPRESSION**
...

... **COMPRESSION** D'IMAGES PAR SOUSTRACTION ADAPTATIVE

Alerting Abstract ...subtracted image set having absolute values of less than predetermined threshold value, is adjusted to **zero** . The image set series from initial to final image sets is compressed using **compression** algorithm to form compressed images....DESCRIPTION OF DRAWINGS - The figure shows the **histogram** of subtracted image.

Title Terms.../Index Terms/Additional Words: **ZERO**

Class Codes
International Classification (Main): **G06K-009/36**
(Additional/Secondary): **G06K-009/46**

Original Publication Data by Authority

Original Abstracts:
...the images from its corresponding pixel in its adjacent image, adjusting the pixel value to **zero** for pixels having an absolute value less than a predetermined threshold value, and compressing said images using a **compression** algorithm to form compressed images. Images compressed in

accordance with the invention can be reduced...

...L'invention concerne des procedes et des systemes de **compression** d'images numeriques. Lesdits procedes et systemes consistent: a agencer les images en serie; a...

...image du pixel correspondant dans l'image adjacente; a ajuster la valeur de pixel sur **zero** pour les pixels presentant une valeur absolue inferieure a une valeur seuil predeterminee; et a compresser lesdites images au moyen d'un algorithme de **compression** , de sorte a former des images compressees. Les images compressees selon l'invention peuvent presenter...

33/3,K/2 (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX

0013766332 - Drawing available
WPI ACC NO: 2003-865484/200380
XRPX Acc No: N2003-690841
Color image data compression **method for medical applications, involves forming reduced wavelet image by discarding wavelet** coefficients **corresponding to image areas of lower importance**
Patent Assignee: DUCKSBURG P G (DUCK-I); QINETIQ LTD (QINE-N); VARGA M J (VARG-I)
Inventor: DUCKSBURG P G; DUCKSBURY P G; DUCKSBURY P G Q M T C; VARGA M J; VARGA M J Q M T C
Patent Family (5 patents, 102 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	
WO 2003090471	A1	20031030	WO 2003GB1545	A	20030409	200380	B
AU 2003219329	A1	20031103	AU 2003219329	A	20030409	200438	E
EP 1497989	A1	20050119	EP 2003715138	A	20030409	200506	E
			WO 2003GB1545	A	20030409		
JP 2005523660	W	20050804	JP 2003587116	A	20030409	200552	E
			WO 2003GB1545	A	20030409		
US 20050169548	A1	20050804	WO 2003GB1545	A	20030409	200552	E
			US 2004510649	A	20041008		

Priority Applications (no., kind, date): GB 20028972 A 20020419; GB 200219816 A 20020827

Patent Details

Number	Kind	Lan	Pg	Dwg	Filing Notes
WO 2003090471	A1	EN	28	5	

National Designated States,Original: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NI NO NZ OM PH PL PT RO RU SC SD SE SG SK SL TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW
Regional Designated States,Original: AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW

AU 2003219329	A1	EN		Based on OPI patent WO 2003090471
EP 1497989	A1	EN		PCT Application WO 2003GB1545
				Based on OPI patent WO 2003090471

Regional Designated States,Original: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LT LU LV MC MK NL PT RO SE SI SK TR

JP 2005523660	W	JA	20	PCT Application WO 2003GB1545

having relatively higher importance, a relatively higher degree of **compression** in those areas indicated to be of lower importance. It performs a hierarchical encoding of a reduced wavelet image by discarding wavelet **coefficients** which satisfy the two criteria of firstly corresponding to image areas of relatively lower importance and secondly being below a certain wavelet **coefficient** threshold. The wavelet **coefficient** threshold is determined from a calculation **histogram** to remove a percentage of the image and can be specified as an input parameter ...

...The invention describes a wavelet **compression** method for colour converted image planes (Y, Cb and Cr), wherein a relatively low (e.g. **zero**) degree of **compression** is performed in areas of an original colour image having relatively higher importance, and a relatively higher degree of **compression** in those areas indicated to be of lower importance. It performs a hierarchical encoding of a reduced wavelet image by discarding wavelet **coefficients** which satisfy the two criteria of firstly corresponding to image areas of relatively lower importance and secondly being below a certain wavelet **coefficient** threshold. The wavelet **coefficient** threshold is determined from a calculation of cumulative **histogram** to remove a percentage of the image and can be specified as an input parameter...
...L'invention concerne un procede de **compression** d'ondelettes destine a des plans d'images colorees converties (Y, Cb et Cr), dans lequel on obtient un degre de **compression** (par exemple, **zero**) relativement faible dans des zones d'une image coloree originale d'importance relativement elevee, et un degre de **compression** relativement eleve dans des zones de moindre importance. Ledit procede permet d'effectuer le codage hierarchique d'une image reduite par ondelettes par suppression de **coefficients** d'ondelettes qui satisfont deux criteres, un premier critere correspondant aux zones d'image de...

...moindre importance et un second critere se situant en-dessous d'un certain seuil de **coefficient** d'ondelette. Le seuil de **coefficient** d'ondelette est determine a partir d'un calcul d' **histogramme** cumulatif afin de supprimer un pourcentage de l'image et peut etre specifie sous forme...
Claims:
b 1 /b . A method of data **compression** for colour images wherein it incorporates the following steps:a) establishing a value for a...

...numbers of pixels;e) transforming the first component and the sub-sampled components into wavelet **coefficients** with the said number of scales;f) transforming the importance-distinguished areas to correspond to location and number of scales of the wavelet transformation; andg) establishing a **wavelet** coefficient threshold and forming a reduced wavelet image by discarding **wavelet** coefficients which both correspond to image areas of relatively lower importance and are below the...

33/3,K/3 (Item 3 from file: 350)
DIALOG(R)File 350:Derwent WPIX

0010240900 - Drawing available
WPI ACC NO: 2000-552749/
XRPX Acc No: N2000-409177
Image frame extractor for image processing system judges suitable image frame for printing/displaying based on comparison between indistinctness value of image frame from compression **image data and preset threshold**

Patent Assignee: HEWLETT-PACKARD CO (HEWP)
Inventor: HONJAN Z; MARICHAL X; XAVIER M; ZHANG H J
Patent Family (2 patents, 2 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	
JP 2000215309	A	20000804	JP 20003573	A	20000112	200051	B
US 6298145	B1	20011002	US 1999233500	A	19990119	200160	E

Priority Applications (no., kind, date): US 1999233500 A 19990119

Patent Details

Number	Kind	Lan	Pg	Dwg	Filing Notes
JP 2000215309	A	JA	16	12	

...**image frame for printing/displaying based on comparison between indistinctness value of image frame from** compression **image data and preset threshold**
...is judged by face detector (41). The suitable image frame for printing or displaying from **compression** image data, is selected based on judgment result.

Class Codes
International Classification (Main): **G06K-009/00** ...

Original Publication Data by Authority

Claims:
...less than a predetermined threshold, wherein the blur detector further comprises an extractor that extracts **DCT** (**Discrete Cosine Transform**) **coefficients** directly from the compressed image frame; a blur calculation module that computes the blur indicator value by examining the occurrence **histogram** of non- **zero DCT coefficients** of the image frame, wherein the blur indicator value is normalized by the size of...

33/3,K/4 (Item 4 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2006 The Thomson Corporation. All rts. reserv.

0008669274 - Drawing available
WPI ACC NO: 1998-207766/199818
XRPX Acc No: N1998-165000
Digital image compression **method to obtain image data set for subsequent reconstruction - performing modified** zero **tree coding on range of absolute image values from largest, to determined smaller absolute value based upon file size or quality**
Patent Assignee: WDE INC (WDEW-N); ZADOR A M (ZADO-I)
Inventor: ZADOR A M
Patent Family (6 patents, 75 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	
WO 1998011728	A1	19980319	WO 1997CA452	A	19970625	199818	B
AU 199732496	A	19980402	AU 199732496	A	19970625	199833	E
EP 908055	A1	19990414	EP 1997928069	A	19970625	199919	E
			WO 1997CA452	A	19970625		
US 6125201	A	20000926	WO 1997CA452	A	19970625	200051	E
			US 1998147403	A	19981218		
JP 2000513895	W	20001017	WO 1997CA452	A	19970625	200056	E
			JP 1998508277	A	19970625		

US 6865291 B1 20050308 US 1996668753 A 19960624 200518 E

Priority Applications (no., kind, date): US 1998147403 A 19981218; US 1996668753 A 19960624

Patent Details

Number	Kind	Lan	Pg	Dwg	Filing Notes
WO 1998011728	A1	EN	60	10	

National Designated States,Original: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE HU IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK TJ TM TR TT UA UG US UZ VN

Regional Designated States,Original: AT BE CH DE DK EA ES FI FR GB GH GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW

AU 199732496	A	EN			Based on OPI patent WO 1998011728
EP 908055	A1	EN			PCT Application WO 1997CA452
					Based on OPI patent WO 1998011728

Regional Designated States,Original: AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

US 6125201	A	EN			PCT Application WO 1997CA452
					Based on OPI patent WO 1998011728
JP 2000513895	W	JA	85		PCT Application WO 1997CA452
					Based on OPI patent WO 1998011728

Digital image compression **method to obtain image data set for subsequent reconstruction...**

...performing modified zero **tree coding on range of absolute image values from largest, to determined smaller absolute value...**

Original Titles:
...PROCEDE, APPAREIL ET SYSTEME DE **COMPRESSION** DE DONNEES...

Alerting Abstract ...redundant colour space to obtain a transform of DC and non-DC terms, with subsequent **lossless** coding of the DC terms. The transform is converted to sign and magnitude format. A...

...vector quantiser encodes the second range values. The resulting data set is coded with a **lossless** entropy encoder to obtain a compressed image data set...

...ADVANTAGE - Allows error detection and correction codes to be applied in **lossless** coding of DC terms, modified **zero** -tree or vector quantisers, as desired, based upon importance of coded information to final reconstructed quality and **compression** requirements.

Title Terms.../Index Terms/Additional Words: **ZERO ;**

Class Codes
International Classification (Main): **G06K-009/00** ...

Original Publication Data by Authority

Original Abstracts:
An apparatus and method for image data **compression** performs a modified **zero** -tree coding on a range of absolute image values from the largest to a determined...

...image, then a vector quantizer codes the remaining values below this determined smaller value to **zero** , and **lossless** entropy coding is

performed on the results of the two coding steps. The determined smaller value can be adjusted by examination of the **histogram** of the tree, or iteratively to meet a preselected compressed image size criterion or to...

...An apparatus and method for image data **compression** performs a modified **zero** -tree coding on a range of absolute image values from the largest to a determined...

...image, then a vector quantizer codes the remaining values below this determined smaller value to **zero** , and **lossless** entropy coding is performed on the results of the two coding steps. The determined smaller value can be adjusted by examination of the **histogram** of the tree, or iteratively to meet a preselected compressed image size criterion or to...

...An apparatus and method for image data **compression** performs a modified **zero** -tree coding on a range of image bit plane values from the largest to a defined smaller value, and a vector quantizer codes the remaining values and **lossless** coding is performed on the results of the two coding steps. The defined smaller value...

...An apparatus and method for image data **compression** performs a modified **zero** -tree coding on a range of absolute image values from the largest to a determined...

...image, then a vector quantizer codes the remaining values below this determined smaller value to **zero** , and **lossless** entropy coding is performed on the results of the two coding steps. The determined smaller value can be adjusted by examination of the **histogram** of the tree, or iteratively to meet a preselected compressed image size criterion or to...

Claims:

...less redundant color space to obtain a transform of DC and non-DC terms;(iii) **lossless** coding the DC terms;(iv) converting the transform to sign and magnitude format and selecting...

...the values in the second range; and(vii) coding the resulting data set with a **lossless** entropy encoder to obtain a compressed image data set...

...less redundant color space to obtain a transform of DC and non-DC terms;(iii) **lossless** coding the DC terms;(iv) converting the transform to sign and magnitude format and selecting...

...scale/spatial location of the transform; and(vii) coding the resulting data set with a **lossless** entropy encoder to obtain a compressed image data set.

33/3,K/5 (Item 5 from file: 350)

0008004927 - Drawing available
WPI ACC NO: 1997-097150/199709
XRPX Acc No: N1997-080547

Image processing method using computer for automatic diagnosis of chest image - obtains horizontal profile dispersion degree coefficient **based on which it is decided that whether selected point is lung upper end or not**

Patent Assignee: ARCH DEV CORP (ARCH-N)
Inventor: DOI K; KATSURAGAWA S; MORISHITA J; TOKA J; XIN U S; XU X

Patent Family (4 patents, 2 countries)

Patent Application

Number	Kind	Date	Number	Kind	Date	Update	
JP 8335271	A	19961217	JP 199696852	A	19960418	199709	B
US 5790690	A	19980804	US 1995428867	A	19950425	199838	E
US 6011862	A	20000104	US 1995428867	A	19950425	200008	E
			US 199898504	A	19980617		
JP 3326070	B2	20020917	JP 199696852	A	19960418	200268	E

Priority Applications (no., kind, date): US 199898504 A 19980617; US 1995428867 A 19950425

Patent Details

Number	Kind	Lan	Pg	Dwg	Filing Notes
JP 8335271	A	JA	37	41	
US 6011862	A	EN			Division of application US 1995428867
					Division of patent US 5790690
JP 3326070	B2	JA	35		Previously issued patent JP 08335271

...**obtains horizontal profile dispersion degree** coefficient **based on which it is decided that whether selected point is lung upper end or**...

Alerting Abstract ...of a lung is fixed based on vertical and horizontal profile of the image. A **coefficient** showing the horizontal profile dispersion degree is obtained and is used to judge whether the...

...organization index and a geometric pattern index are formed which are used to form a **histogram** . The **histogram** is applied to an artificial neural network which categorizes whether the image is normal or...

Title Terms.../Index Terms/Additional Words: **COEFFICIENT** ;

Class Codes
International Classification (Main): **G06K-009/00** ...

... **G06K-009/62**
... (Additional/Secondary): **G06K-009/46**

Original Publication Data by Authority

Original Abstracts:
...system used to produce the image. Texture and/or geometric pattern indices are produced. A **histogram** (s) of the produced index (indices) is produced and values of the **histogram** (s) are applied as inputs to a trained artificial neural network, which classifies the image...

...system used to produce the image. Texture and/or geometric pattern indices are produced. A **histogram** (s) of the produced index (indices) is produced and values of the **histograms**) are applied as inputs to a trained artificial neural network, which classifies the image as...
Claims:
...upper central area of the image,b) identifying candidates for a lung top based on **zero** -crossings with negative slopes in the first derivative,c) selecting as said lung top a...

...step c) greater than said first predetermined ratio and less than said second predetermined ratio, **determining** a histogram of the texture index;e) applying values **of** said histogram, determined in the preceding step d), selected at predetermined upper areas **of** the histogram as inputs

41/3,K/1 (Item 1 from file: 347)
DIALOG(R)File 347:JAPIO
(c) 2006 JPO & JAPIO. All rts. reserv.

07491341 **Image available**
DEVICE AND METHOD FOR ENCODING IMAGE SIGNAL, AND DEVICE AND METHOD FOR DECODING THE IMAGE SIGNAL

PUB. NO.: 2002-359859 [JP 2002359859 A]
PUBLISHED: December 13, 2002 (20021213)
INVENTOR(s): KATO MOTOKI
APPLICANT(s): SONY CORP
APPL. NO.: 2002-092882 [JP 200292882]
Division of 05-059113 [JP 9359113]
FILED: March 18, 1993 (19930318)

ABSTRACT

... variable length encoder 13 for performing variable length coding of the conversion coefficient. The variable **length** encoder 13 **calculates** a CBP code, to represent a non- **zero** conversion coefficient in any of smaller blocks obtained by further dividing the macroblock separately for...

... variable length coding of the CBP value in the luminance signal block with a first **VLC** table to output a first **VLC** code, and conducts variable length coding of the CBP value in the color-difference signal block with a second **VLC** table, to outputs a second **VLC** code.

41/3,K/2 (Item 2 from file: 347)
DIALOG(R)File 347:JAPIO
(c) 2006 JPO & JAPIO. All rts. reserv.

05128581 **Image available**
DIGITAL ENCODING DEVICE AND DIGITAL ENCODING/DECODING DEVICE

PUB. NO.: 08-084081 [JP 8084081 A]
PUBLISHED: March 26, 1996 (19960326)
INVENTOR(s): OBARA KAZUTAKA
APPLICANT(s): MATSUSHITA ELECTRIC IND CO LTD [000582] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 07-169814 [JP 95169814]
FILED: July 05, 1995 (19950705)

ABSTRACT

... this digital encoding or encoding/decoding device for compressing and expanding picture data by using **Huffman** encoding, a **Huffman** encoding circuit 4 outputs variable length codes from the combination of the **zero - run** and value of an AC coefficient. An AC code length table provided in a code **length calculation** circuit 5 stores the correspondence relation of the variable length codes and the code length beforehand. The code **length calculation** circuit 5 inputs not the combination of the **zero - run** and value of the AC coefficient but the **variable length code** from the **Huffman** encoding circuit 4 and **calculates** the code **length** from the inputted **variable length code** based on the AC code length table. Thus, the scale of the AC code length...

... reduced compared with the conventional case of storing the correspondence of the combination of the **zero - run** and value of the AC

coefficient and the code length.

41/3,K/3 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX

0011176490 - Drawing available
WPI ACC NO: 2002-114300/200215
XRPX Acc No: N2002-085239
Variable length encoding method for variable length **encoder, involves** calculating **corrected level.**
Patent Assignee: MATSUSHITA DENKI SANGYO KK (MATU); MATSUSHITA ELECTRIC IND CO LTD (MATU); NAKAMURA T (NAKA-I); OHASHI M (OHAS-I)
Inventor: NAKAMURA T; OHASHI M
Patent Family (7 patents, 30 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	
WO 2001091470	A1	20011129	WO 2001JP4300	A	20010523	200215	B
US 20030006917	A1	20030109	WO 2001JP4300	A	20010523	200311	E
			US 200231711	A	20020221		
EP 1294197	A1	20030319	EP 2001934315	A	20010523	200322	E
			WO 2001JP4300	A	20010523		
JP 2001586928	X	20030805	JP 2001586928	A	20010523	200353	E
			WO 2001JP4300	A	20010523		
US 6636168	B2	20031021	WO 2001JP4300	A	20010523	200370	E
			US 200231711	A	20020221		
JP 3573735	B2	20041006	JP 2001586928	A	20010523	200465	E
			WO 2001JP4300	A	20010523		
JP 2004297827	A	20041021	JP 2001586928	A	20010523	200469	E
			JP 2004156589	A	20040526		

Priority Applications (no., kind, date): JP 2000151193 A 20000523

Patent Details

Number	Kind	Lan	Pg	Dwg	Filing Notes
WO 2001091470	A1	JA	69	13	
National Designated States,Original: CN JP KR US					
Regional Designated States,Original: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR					
US 20030006917	A1	EN			PCT Application WO 2001JP4300
EP 1294197	A1	EN			PCT Application WO 2001JP4300
					Based on OPI patent WO 2001091470
Regional Designated States,Original: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR					
JP 2001586928	X	JA			PCT Application WO 2001JP4300
					Based on OPI patent WO 2001091470
US 6636168	B2	EN			PCT Application WO 2001JP4300
					Based on OPI patent WO 2001091470
JP 3573735	B2	JA	33		PCT Application WO 2001JP4300
					Based on OPI patent WO 2001091470
JP 2004297827	A	JA	27		Division of application JP 2001586928

Variable length encoding method for variable length **encoder, involves** calculating **corrected level.**

Alerting Abstract ...NOVELTY - The variable **length** encoding method includes **calculating** a corrected level.DESCRIPTION - The encoding method involves performing **VLC** and hence performing code assignment to a set

(Last, Run, Level). There is a subsequent...

Original Publication Data by Authority

Original Abstracts:
...the present invention, as shown in figure 1, carries out step (a) of performing a **VLC** process and assigning a code to a combination of (Last, Run, Level), step (b) of...

...the present invention, as shown in FIG. b 1, /b carries out step (a) of performing a **VLC** process and assigning a code to a combination of (Last, Run, Level), step (b) of...

...A variable length coding (**VLC**) method and a variable length coding apparatus for producing variable length coding having a reduced number of arithmetic cycles. The method includes carrying out (a) performing a **VLC** process and assigning a code to a combination of (Last, Run, Level), (b) subtracting LMAX...

...A variable length encoding method comprising step (a) of performing **VLC** and thereby performing code assignment to a set of (Last, Run, Level), step (b) of...

Claims:
A variable length coding method by which **Run** as preceding **zero** coefficients, Level as a value of a non- **zero** coefficient, and Last indicating whether the non- **zero** coefficient is the last one from discrete cosine transform coefficients which are rearranged in an one-dimensional array are taken as a combination of (Last, Run, Level), a **VLC** process of assigning a unique code to the combination is carried out, and when the **VLC** assignment cannot be performed, three escape modes are applied, thereby performing coding, wherein processes of...

...1 /b . A variable length coding method **by** which Run **as** preceding zero coefficients, Level as a value of **a** non-zero coefficient, and Last indicating whether **the** non-zero coefficient is the last one from discrete cosine transform coefficients which are rearranged in an one-dimensional array are taken as a combination of (Last, Run, **Level**), a VLC process of assigning a unique code to the combination is carried out, and **when** the VLC assignment cannot be performed, three escape modes are applied, thereby performing coding, wherein...

...What is claimed is:3. **A** variable length coding (VLC) apparatus comprising an RMAX table for receiving a Level absolute value...
...signal and a Last signal; an LMAX table for receiving a Run signal and the **Last** signal; a first VLC table for receiving the Level absolute value signal, a signal indicating...

...from the Run signal; a second register for holding an output signal of the first **subtraction** circuit; a second VLC table for receiving an output signal of the second register, the...

...Level absolute value signal; a third register for holding an output signal of the second **subtraction** circuit; a third VLC table for receiving an output signal of the third register, the...

...signal, the Run signal, and the Last signal; a first register for holding an output **signal** of the first VLC table; a fourth register for holding an output **signal** of the second VLC table; a fifth register for holding an output **signal** of the third **VLC** table; an RMAX VLC generation

circuit for receiving an output signal of the **fourth** register; an LMAX VLC generation circuit for receiving an output signal of the fifth register ...

...and a selection circuit for receiving the output signal of the first register, an output **signal** of the RMAX VLC generation circuit, an output **signal** of the LMAX VLC generation circuit, and an output signal of the FLC generation circuit...

...the selection circuit selects one output signal from the output signal of the first register, **the** output signal of the RMAX VLC generation circuit, **the** output signal of the LMAX VLC generation circuit, and the output signal of the FLC...

41/3,K/4 (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX

0010916148 - Drawing available
WPI ACC NO: 2001-537602/200160
XRPX Acc No: N2001-399364
System for inserting additional information in discrete cosine transform coefficients by referring to variable - length code **table**
Patent Assignee: NEC CORP (NIDE); NIPPON ELECTRIC CO (NIDE)
Inventor: HASHIMOTO M
Patent Family (8 patents, 29 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	
EP 1067799	A2	20010110	EP 2000113371	A	20000623	200160	B
CA 2312138	A1	20001224	CA 2312138	A	20000623	200160	E
JP 2001007705	A	20010112	JP 1999178538	A	19990624	200160	E
KR 2001007522	A	20010126	KR 200035047	A	20000624	200160	E
KR 347395	B	20020803	KR 200035047	A	20000624	200309	E
JP 3407869	B2	20030519	JP 1999178538	A	19990624	200334	E
US 6775416	B1	20040810	US 2000602229	A	20000623	200453	E
US 20040179746	A1	20040916	US 2000602229	A	20000623	200461	E
			US 2004808754	A	20040325		

Priority Applications (no., kind, date): JP 1999178538 A 19990624

Patent Details

Number	Kind	Lan	Pg	Dwg	Filing Notes
EP 1067799	A2	EN	18	10	
Regional Designated States,Original: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI					
CA 2312138	A1	EN			
JP 2001007705	A	JA	11		
KR 347395	B	KO			Previously issued patent KR 2001007522
JP 3407869	B2	JA	11		Previously issued patent JP 2001007705
US 20040179746	A1	EN			Continuation of application US 2000602229

System for inserting additional information in discrete cosine transform coefficients by referring to variable - length code **table**
...length restoring section (5) correcting the discrete cosine transform (DCT) coefficient by reference to a **variable length code** table. The total length of the codes generated from the corrected DCT

coefficients is equal...
...DCT coefficients. The section (5) has a difference calculator for the code lengths, target code **length calculator** and a level corrector operating on a combination of a **zero run** length and the corrected level of the non- **zero** DCT coefficient matching the target code length.

Original Publication Data by Authority

Claims:
...system for inserting additional information in DCT (discrete cosine transform) coefficients by referring to a **variable - length code** table (7), wherein the DCT coefficients are generated in blocks from image data, the system...

...the changed DCT coefficients in the block to produce corrected DCT coefficients by referring to **the variable - length** code table, wherein the one DCT coefficient is selected so that a total code length...

...A system for inserting additional information in DCT (discrete cosine transform) coefficients by referring to **a variable - length** code table, wherein the DCT coefficients are generated in blocks from image data, the system...
...from the changed DCT coefficients in the block to produce corrected DCT coefficients by referring **to the variable** -length code table, wherein the one DCT coefficient is selected so that a total code...

...1. A system for inserting additional information in DCT (discrete cosine transform) coefficients by referring **to a variable** -length code table, wherein the DCT coefficients are generated in blocks from image data, the ...

...block, excluding the at least one changed DCT coefficient, to produce corrected DCT coefficients by **referring to the** variable-length code table, the DCT coefficient being selected so that a total code length...

...input DCT coefficients in the block,wherein the total code length restoring section comprises:a **difference** calculator for calculating **a** total code length difference between the original total code length and a total code length of codes generated from the changed DCT coefficients in the block; **a target** code **length** calculator for calculating **a** target code length **for** a non-zero DCT coefficient sequentially selected from the changed DCT coefficients based on a difference between the total code length difference and a current code length **of** the non-zero DCT coefficient; anda level corrector for correcting a **level** of the non-zero DCT coefficient to produce corrected DCT coefficients when a corrected code length of a code generated from **a combination** of a zero-run length and a corrected **level** of the non-zero DCT coefficient substantially matches the target code length.

41/3,K/5 (Item 3 from file: 350)
DIALOG(R)File 350:Derwent WPIX

0009196805 - Drawing available
WPI ACC NO: 1999-121355/
XRPX Acc No: N1999-088555
Motion vector encoding method - calculating length **component of motion vector and selecting direction component from encoding table**

Patent Assignee: NIPPON TELEGRAPH & TELEPHONE CORP (NITE)
Inventor: JIYOSAWA H; JOZAWA H; KAMIKURA K; SAGATA A; SHIMIZU A; WATANABE H ; WATANABE Y

Patent Family (3 patents, 21 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	
WO 1999003284	A1	19990121	WO 1998JP3075	A	19980709	199910	B
JP 11088890	A	19990330	JP 1998194612	A	19980709	199923	E
US 6473458	B1	20021029	WO 1998JP3075	A	19980709	200274	E
			US 1999254275	A	19990303		

Priority Applications (no., kind, date): JP 1997183987 A 19970709

Patent Details

Number	Kind	Lan	Pg	Dwg	Filing Notes
WO 1999003284	A1	JA	49	13	
National Designated States,Original: CA US					
Regional Designated States,Original: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE					
JP 11088890	A	JA	17		
US 6473458	B1	EN			PCT Application WO 1998JP3075 Based on OPI patent WO 1999003284

... calculating length **component of motion vector and selecting direction component from encoding table**

Original Titles:
...PROCEDE DE CODAGE/DECODAGE DE VECTEURS MOBILES, CODAGE/DECODAGE DE VECTEURS MOBILES, REMISE A **ZERO** SUPPORT D'ENREGISTREMENT DE PROGRAMMES DE CODAGE/DECODAGE DE VECTEURS MOBILES

Alerting Abstract ...vector. The length component of the motion vector is calculated and if this is not **zero** , an entry in an encoding table of directional components is selected...

Original Publication Data by Authority

Original Abstracts:
...prediction error vector is calculated (step S b 2 /b). After the length component of the motion **vector** is calculated (step **S** b 3 /b), the length component is variable-length-encoded (step S b 4 /b). The length component is...

...encoding and decoding programs. The moving vector of a block to be encoded is detected (**step** S1), a predicted **error** vector is calculated (step S2), the length component of the moving vector **is calculated** (**step** S3), converted to a variable length code (step S4), the length component is **checked** (step S5), **the** directional component is calculated when the length component is not 0 (step S6) and the...

Claims:
...uses motion-compensating interframe prediction, the motion vector encoding method comprising: a first step of **calculating** a **length** component of a motion vector; a second step of encoding the **calculated length** component and outputting the encoded result as length component information; a third step of calculating...

41/3,K/6 (Item 4 from file: 350)
DIALOG(R)File 350:Derwent WPIX

0008890693 - Drawing available
WPI ACC NO: 1998-439728/
XRPX Acc No: N1998-342709

Code-amount controller for use in video coder - outputs quantised values (QVs) as they are to variable-length coding circuit if accumulated code-length (CL) does not exceed target code-amount, and outputs QVs after rounding off excessive portion if estimated CL exceeds target code-amount

Patent Assignee: SHARP KK (SHAF)
Inventor: FUJIWARA Y; HYODO M; MATSUURA T

Patent Family (5 patents, 25 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	
EP 861003	A2	19980826	EP 1998301301	A	19980223	199838	B
JP 10243399	A	19980911	JP 199741124	A	19970225	199847	E
US 6091774	A	20000718	US 199830205	A	19980225	200037	E
EP 861003	B1	20030416	EP 1998301301	A	19980223	200328	E
DE 69813349	E	20030522	DE 69813349	A	19980223	200341	E
			EP 1998301301	A	19980223		

Priority Applications (no., kind, date): EP 1998301301 A 19980223; JP 199741124 A 19970225

Patent Details

Number	Kind	Lan	Pg	Dwg	Filing Notes
EP 861003	A2	EN	18	7	
Regional Designated States,Original: AL AT BE CH DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI					
JP 10243399	A	JA	11		
EP 861003	B1	EN			
Regional Designated States,Original: DE FR GB					
DE 69813349	E	DE			Application EP 1998301301 Based on OPI patent EP 861003

Alerting Abstract ...sequence of quantized values into a set of the number of continuous zeroes and non- **zero** quantized values and a code-length table (8) containing variable code-length values to be allocated to respective sets of the number of continuous zeroes and non-**zero** values...

...9) when the accumulated code-length does not exceed the target code-amount. If the **estimated** code- **length** exceeds the target code-amount, the rounding circuit (7) outputs the quantized values after rounding...

Original Publication Data by Authority

Original Abstracts:
...quantized values into a set of the number of continuous zeroes and following thereto non- **zero** quantized values and a code-length table (8) containing variable code-length values to be allocated to respective sets of the number of continuous zeroes and non- **zero** values. Before variable-length encoding of the image block,the rounding circuit (7) estimates by...

...9) when the accumulated code-length does not exceed the target code-amount. If the **estimated** code- **length** exceeds the target code-amount, the rounding circuit (7) outputs the quantized values after

rounding...

...quantized values into a set of the number of continuous zeroes and following thereto non- **zero** quantized values and a code-length table containing variable code-length values to be allocated to respective sets of the number of continuous zeroes and non- **zero** values. Before variable-length encoding of the image block, the rounding circuit estimates by accumulating...

...circuit when the accumulated code-length does not exceed the target code-amount. If the **estimated** code- **length** exceeds the target code-amount, the rounding circuit outputs the quantized values after rounding off...

Claims:

...into a plurality of data; table means (8) for outputting the code-length of a **variable - length code** corresponding to each data; accumulating means (23, 28) for determining a predictive code-amount by...

...values into a plurality of data; table means (8) for outputting the code-length of **a variable - length** code corresponding to each data; accumulating means (23, 28) for determining a predicted code-amount...

...quantized values into a plurality of data; table means for outputting the code-length of **a variable - length** code corresponding to each data; accumulating means for determining a predictive code-amount by accumulating ...

41/3,K/7 (Item 5 from file: 350)

0008366141 - Drawing available
WPI ACC NO: 1997-480535/199744
XRPX Acc No: N1997-400755

Hybrid lossless entropy coding method for JPEG and MPEG graphics - adaptively estimating values for parameters defining approximation between quantisation size and logarithm of quantisation error, and recursively calculating **optimal quantisation** size **for each band to achieve desired bit rate**

Patent Assignee: AMERICA ONLINE INC (AMON-N); JOHNSON GRACE CO (JOHN-N)
Inventor: HOULE P S; WANG S; WANG Z

Patent Family (15 patents, 21 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	
WO 1997035427	A1	19970925	WO 1997US4279	A	19970319	199744	B
US 5682152	A	19971028	US 1996618368	A	19960319	199749	E
AU 199722161	A	19971010	AU 199722161	A	19970319	199806	E
EP 888689	A1	19990107	EP 1997915146	A	19970319	199906	E
			WO 1997US4279	A	19970319		
BR 199708130	A	19990727	BR 19978130	A	19970319	199941	E
			WO 1997US4279	A	19970319		
US 6049630	A	20000411	US 1996618368	A	19960319	200025	E
			US 1997962927	A	19971027		
EP 1005231	A1	20000531	EP 1997915146	A	19970319	200031	E
			EP 2000200570	A	19970319		
AU 719715	B	20000518	AU 199722161	A	19970319	200032	E
MX 199807582	A1	19990601	MX 19987582	A	19980918	200058	E
JP 2001501783	W	20010206	JP 1997533613	A	19970319	200111	E
			WO 1997US4279	A	19970319		

CA 2358857	A1	19970925	CA 2249259	A	19970319	200207	E
			CA 2358857	A	19970319		
CA 2249259	C	20020101	CA 2249259	A	19970319	200212	E
			WO 1997US4279	A	19970319		
JP 3271985	B2	20020408	JP 1997533613	A	19970319	200227	E
			WO 1997US4279	A	19970319		
EP 888689	B1	20030604	EP 1997915146	A	19970319	200344	E
			WO 1997US4279	A	19970319		
DE 69722601	E	20030710	DE 69722601	A	19970319	200353	E
			EP 1997915146	A	19970319		
			WO 1997US4279	A	19970319		

Priority Applications (no., kind, date): US 1997962927 A 19971027; WO 1997US4279 A 19970319; US 1996618368 A 19960319

Patent Details

Number	Kind	Lan	Pg	Dwg	Filing Notes
WO 1997035427	A1	EN	42	5	
National Designated States,Original: AU BR CA JP MX					
Regional Designated States,Original: AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE					
US 5682152	A	EN	11	5	
AU 199722161	A	EN			Based on OPI patent WO 1997035427
EP 888689	A1	EN			PCT Application WO 1997US4279
					Based on OPI patent WO 1997035427
Regional Designated States,Original: AT DE FR GB SE					
BR 199708130	A	PT			PCT Application WO 1997US4279
					Based on OPI patent WO 1997035427
US 6049630	A	EN			Division of application US 1996618368
					Division of patent US 5682152
EP 1005231	A1	EN			Division of application EP 1997915146
					Division of patent EP 888689
Regional Designated States,Original: AT DE FR GB SE					
AU 719715	B	EN			Previously issued patent AU 9722161
					Based on OPI patent WO 1997035427
JP 2001501783	W	JA	37		PCT Application WO 1997US4279
					Based on OPI patent WO 1997035427
CA 2358857	A1	EN			Division of application CA 2249259
CA 2249259	C	EN			PCT Application WO 1997US4279
					Based on OPI patent WO 1997035427
JP 3271985	B2	JA	16		PCT Application WO 1997US4279
					Previously issued patent JP 200101783
					Based on OPI patent WO 1997035427
EP 888689	B1	EN			PCT Application WO 1997US4279
					Based on OPI patent WO 1997035427
Regional Designated States,Original: AT DE FR GB SE					
DE 69722601	E	DE			Application EP 1997915146
					PCT Application WO 1997US4279
					Based on OPI patent EP 888689
					Based on OPI patent WO 1997035427

...**values for parameters defining approximation between quantisation size and logarithm of quantisation error, and recursively** calculating **optimal quantisation** size **for each band to achieve desired bit rate**

Alerting Abstract ...The entropy coding method is provided for compressing data comprising a matrix including several **zero** indices and non- **zero** indices. The method includes the steps of replacing each non-

zero index in the matrix by a unique token, thereby generating a parsed matrix including several **zero** indices and token indices. Each non- **zero** index is placed far from the matrix into a first data stream. The parsed matrix...

...run length codes for the **zero** indices and unique token indices. The even run length codes are then placed into a...

...The unique token is 1 and the coding algorithm is **Huffman** or arithmetic coding. The matrix comprises quantisation indices derived from an image by a lossy...

Original Publication Data by Authority

Original Abstracts:
...parameters defining an approximation between quantization size and the logarithm of quantization error, and recursively **calculates** the optimal quantization **size** for each band to achieve a desired bit rate. The baseband and subbands are transformed...

...sizes. The lossless entropy coder stage (3) uses the observation that the entropy property of **run** lengths of **zero** index values in the subband quantization matrices is different from the entropy property of non- **zero** indices. Each quantization matrix is parsed so that each non- **zero** index is extracted into a separate steam, and the remaining position information is parsed into...

...0" and an even stream of run length values for "1". These three streams are **Huffman** coded separately in conventional fashion...

...parameters defining an approximation between quantization size and the logarithm of quantization error, and recursively **calculates** the optimal quantization **size** for each band to achieve a desired bit rate. The baseband and subbands are transformed...

...sizes. The lossless entropy coder stage (3) uses the observation that the entropy property of **run** lengths of **zero** index values in the subband quantization matrices is different from the entropy property of non- **zero** indices.Each quantization matrix is parsed so that each non- **zero** index is extracted into a separate stream, and the remaining position information is parsed into...

...0" and an even stream of run length values for "1". These three streams are **Huffman** coded separately in conventional fashion...

...parameters defining an approximation between quantization size and the logarithm of quantization error, and recursively **calculates** the optimal quantization **size** for each band to achieve a desired bit rate. The baseband and subbands are transformed...

...quantization sizes. The lossless entropy coder stage uses the observation that the entropy property of **run** lengths of **zero** index values in the subband quantization matrices is different from the entropy property of non- **zero** indices. Each quantization matrix is parsed so that each non- **zero** index is extracted into a separate stream, and the remaining position information is parsed into...

...0" and an even stream of run length values for "1". These three streams are **Huffman** coded separately in conventional fashion. This hybrid

algorithm gives an approximately 10% percent improvement over conventional run length and **Huffman** coding for similar images. The overall compression algorithm gives about 2(similar)6 dB improvement...

...parameters defining an approximation between quantization size and the logarithm of quantization error, and recursively **calculates** the optimal quantization **size** for each band to achieve a desired bit rate. The baseband and subbands are transformed...

...quantization sizes. The lossless entropy coder stage uses the observation that the entropy property of **run** lengths of **zero** index values in the subband quantization matrices is different from the entropy property of non- **zero** indices. Each quantization matrix is parsed so that each non- **zero** index is extracted into a separate stream, and the remaining position information is parsed into...

...0" and an even stream of run length values for "1". These three streams are **Huffman** coded separately in conventional fashion. This hybrid algorithm gives an approximately 10% percent improvement over conventional run length and **Huffman** coding for similar images. The overall compression algorithm gives about 2(similar)6 dB improvement...

...parameters defining an approximation between quantization size and the logarithm of quantization error, and recursively **calculates** the optimal quantization **size** for each band to achieve a desired bit rate. The baseband and subbands are transformed...

...sizes. The lossless entropy coder stage (3) uses the observation that the entropy property of **run** lengths of **zero** index values in the subband quantization matrices is different from the entropy property of non- **zero** indices.Each quantization matrix is parsed so that each non- **zero** index is extracted into a separate stream, and the remaining position information is parsed into...

...0" and an even stream of run length values for "1". These three streams are **Huffman** coded separately in conventional fashion.

Claims:

...the logarithm of quantization error for each of the baseband and multiple subbands; andc. **recursively** calculating an optimal **quantization** size for each of the baseband and multiple subbands to achieve a desired bit rate...

...hybrid lossless entropy coding method for compressing data comprising a matrix (50) including a plurality **of** zero indices and **non** -zero indices, the method including the steps of:(a) replacing each **non** -zero index in the matrix by a unique token, thereby generating a parsed matrix (51) including a plurality **of** zero indices and token indices;(b) placing each **non** -zero index from the matrix (50) into a first data stream (52);(c) run length coding the parsed matrix (51) into alternating run length codes (53) for **the** zero indices and unique token indices;(d) placing the run length codes for **the** zero indices into a second data stream (55);(e) placing the run length codes for...

...avec codage hybride a entropie sans perte comprenant une matrice (50) comportant une pluralite d' **indices** zero et une pluralite d'indices **non** -zero, le procede comprenant les etapes consistant a:(a) remplacer chaque indice **non** -zero de la matrice par un jeton unique, generant ainsi une matrice analysee (51) comprenant une pluralite d' **indices** zero et d'indices de jeton;(b) placer chaque indice **non** -zero de la matrice (50) dans un premier flux de donnees (52);(c) coder en...

...course la matrice analysee (51) en codes de longueur de course (53) alternes pour les **indices** zero et les indices de jeton unique;(d) placer les codes de longueur de course pour les **indices** zero dans un second flux de donnees (55);(e) placer les codes de longueur de...

...A hybrid lossless entropy coding method for compressing data comprising a matrix including a plurality **of** zero indices and **non** -zero indices, the method including the steps of:(a) replacing each **non** -zero index in the matrix by a unique token, thereby generating a parsed matrix including a plurality **of** zero indices and token indices;(b) placing each **non** -zero index from the matrix into a first data stream;(c) run length coding the parsed matrix into alternating run length codes for **the** zero indices and unique token indices;(d) placing the even run length codes into a...

...the logarithm of quantization error for each of the baseband and multiple subbands; and(c) **recursively** calculating an optimal **quantization** size for each of the baseband and multiple subbands to achieve a desired bit rate...

41/3,K/8 (Item 6 from file: 350)
DIALOG(R)File 350:Derwent WPIX

0008088822 - Drawing available
WPI ACC NO: 1997-186040/199717
XRPX Acc No: N1997-153552
Encoding device and for processing enciphering/dividing variable length code **(VLC) - uses two barrel shifters which generate newly coupled variable length codeword data and segment of constant length to be added to pseudo code length of currently input codeword**
Patent Assignee: DAEWOO ELECTRONICS CO LTD (DAEW-N)
Inventor: KANG D; KANG D S; KWANG D; TONG-SOO K
Patent Family (7 patents, 4 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	
JP 9046237	A	19970214	JP 1995334072	A	19951129	199717	B
KR 1997009422	A	19970224	KR 199522590	A	19950727	199812	E
US 5754128	A	19980519	US 1995560696	A	19951120	199827	E
CN 1141538	A	19970129	CN 1995117558	A	19951129	200051	E
KR 180164	B1	19990501	KR 199522590	A	19950727	200051	E
JP 3389391	B2	20030324	JP 1995334072	A	19951129	200323	E
CN 1108014	C	20030507	CN 1995117558	A	19951129	200540	E

Priority Applications (no., kind, date): KR 199522590 A 19950727

Patent Details

Number	Kind	Lan	Pg	Dwg	Filing Notes
JP 9046237	A	JA	9	5	
JP 3389391	B2	JA	9		Previously issued patent JP 09046237

Encoding device and for processing enciphering/dividing variable length code **(VLC) -**

Original Titles:
DEVICE FOR ENCODING/DIVIDING **VARIABLE LENGTH CODE**
...

... **Variable - length code** encoding and segmenting apparatus having a

byte alignment unit.

Alerting Abstract ...source code is stored in the first register. Each source code is mapped to the **variable length code** . A look-up table (20) generates the corresponding code length. The second register generates and...
...of the dummy codeword. A second barrel shifter (40) generates a data segment of constant **length** . An adder (36) **computes** the sum of the code length or the pseudo code length of the currently input...

Original Publication Data by Authority

Original Abstracts:
...segment of the N-bit segments is shorter than N, inserting bits having the value **zero** between the last bit of the last segment and a start code with a start...

...unit produces a pseudo codeword representative of a set of parallel bits with the value **zero** having a width equal to the maximum bit length of the variable-length codewords instead...
Claims:
...the N-bit segments is shorter than said N, for inserting bits having the value **zero** between the last bit of the last segment and a start code with a start...

...signal, producing a pseudo codeword representative of a set of parallel bits with the value **zero** having a width equal to the maximum bit length of the variable-length codewords, and...

41/3,K/9 (Item 7 from file: 350)
DIALOG(R)File 350:Derwent WPIX

0007460320 - Drawing available
WPI ACC NO: 1996-070470/
XRPX Acc No: N1996-059164
Variable length digital coding-decoding appts. for image compression and expansion - using Huffman **coding with code length table storing variable-length coded values and** VLC **and VLD share code** length calculation **circuit and** calculation **circuit's logical table**
Patent Assignee: MATSUSHITA DENKI SANGYO KK (MATU); MATSUSHITA ELEC IND CO LTD (MATU); MATSUSHITA ELECTRIC IND CO LTD (MATU)
Inventor: OBARA K; OHARA K
Patent Family (8 patents, 6 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	
EP 692913	A2	19960117	EP 1995110949	A	19950712	199608	B
JP 8084081	A	19960326	JP 1995169814	A	19950705	199622	E
CN 1120773	A	19960417	CN 1995109983	A	19950712	199745	E
US 5901250	A	19990504	US 1995501731	A	19950712	199925	E
KR 186915	B1	19990501	KR 199519314	A	19950703	200052	E
EP 692913	B1	20011031	EP 1995110949	A	19950712	200169	E
DE 69523516	E	20011206	DE 69523516	A	19950712	200203	E
			EP 1995110949	A	19950712		
CN 1085461	C	20020522	CN 1995109983	A	19950712	200519	E

Priority Applications (no., kind, date): EP 1995110949 A 19950712; JP 1994160986 A 19940713

Patent Details

Number	Kind	Lan	Pg	Dwg	Filing Notes
EP 692913	A2	EN	21	13	
Regional Designated States,Original: DE FR NL					
JP 8084081	A	JA	14	13	
EP 692913	B1	EN			
Regional Designated States,Original: DE FR NL					
DE 69523516	E	DE			Application EP 1995110949
					Based on OPI patent EP 692913

...**using** Huffman **coding with code length table storing variable-length coded values and** VLC **and VLD share code** length calculation **circuit and** calculation **circuit's logical table**

Alerting Abstract ...The apparatus has a **Huffman** coding circuit which converts a combination of **ZERO RUN** and VALUE into a **variable - length code** . A code **length calculation** circuit has an AC code length table for prestoring variable-length codes and their code...

...The code **length calculation** circuit inputs not a **ZERO RUN** -VALUE combination but a **variable - length code** from the **Huffman** coding circuit. This means it is effectively **calculating** from the **variable - length code** inputted its code length according to the AC code length table...

...ADVANTAGE - Reduces code- **length calculation** circuit logical table, which means reduction in circuit size and power consumption.

Title Terms.../Index Terms/Additional Words: **HUFFMAN** ;

Original Publication Data by Authority

Original Abstracts:

...a digital coding and decoding apparatus for image data compression and expansion by means of **Huffman** coding, a **Huffman** coding circuit converts a combination of **ZERO RUN** and VALUE into a **variable - length code** . A code **length calculation** circuit has an AC code length table for prestoring variable-length codes and their code lengths in corresponding relationship. The code **length calculation** circuit inputs not a ZERORUN-VALUE combination but a **variable - length code** from the **Huffman** coding circuit, thereby **calculating** from the **variable - length code** inputted its code length according to the AC code length table...

...a digital coding and decoding apparatus for image data compression and expansion by means of **Huffman** coding, a **Huffman** coding circuit converts a combination of **ZERO RUN** and VALUE into a **variable - length code** . A code **length calculation** circuit has an AC code length table for prestoring variable-length codes and their code lengths in corresponding relationship. The code **length calculation** circuit inputs not a ZERORUN-VALUE combination but a **variable - length code** from the **Huffman** coding circuit, thereby **calculating** from the **variable - length code** inputted its code length according to the AC code length table. The present invention can...

Claims:

...great number of transform coefficients, each of said transform coefficients having either a value of **zero** or a value other than **zero** ; a variable-length coding circuit for converting transform coefficients from

said orthogonal transform circuit into a variable- **length code** , for padding said **variable - length code** to a fixed-length code, and for providing said fixed-length code to outside said...

...a first logical table for storing, in corresponding relationship, combinations of the numbers of consecutive **zero** -valued transform coefficients and nonzero-valued transform coefficients, and variable-length codes; a coding circuit...

...for converting, based on said first logical table, a combination of the number of consecutive **zero** -valued transform coefficients and a nonzero-valued transform coefficient of said received transform coefficients, into a **variable - length code** ; a second logical table for storing variable-length codes and code lengths thereof in corresponding relationship; a code **length calculation** circuit for receiving a **variable - length code** from said coding circuit, and for calculating, based on said second logical table, a code length of said received **variable - length code** ; a padding circuit for receiving a **variable - length code** from said coding circuit and a code length from said code **length calculation** circuit, and for padding, based on said received code length, said received **variable - length code** to a fixed-length code...

...data to find a great number of transform coefficients, each of said transform coefficients having **either** a value of zero or **a** value other than zero,a variable-length coding circuit (25) for converting transform coefficients from said orthogonal transform circuit (**14**) **into** a variable-length **code , for padding** said variable-length code to a fixed-length code, and for providing said fixed-length...

...circuit (25) including:a first logical table (3) for storing, in corresponding relationship, combinations of **the** numbers of consecutive zero-valued **transform** coefficients and non zero-valued transform coefficients, and variable-length codes,a coding circuit (4...

...transform circuit, and for converting, based on said first logical table (3), a combination of **the** number of consecutive zero-valued transform coefficients and a nonzero-valued transform coefficient of said received **transform coefficients , into** a variable-length code, anda padding **circuit** (**7**) **for** receiving a variable-length code from said coding circuit (4) **and for padding** said received variable-length code to a fixed-length code b characterized in that /b said variable...

...25) further including:a second logical table (6) for storing variable-length codes and code **lengths thereof** in corresponding relationship,a code **length calculation circuit** (5) for receiving a variable-length code from said coding circuit (4), and for calculating, based on said second logical table (**6**), **a code** length of said received variable-length code, andsaid padding circuit (7) **further receiving** a code length from said code **length calculation circuit** (5)and padding said received variable-length code to a fixed-length code based on...

...trouver un grand nombre de coefficients de transformee, chacun desdits coefficients de transformee presentant soit **une** valeur nulle, soit une valeur autre que zero,un circuit de codage a longueur variable...

...for performing an orthogonal transform on data to find a great number of transform coefficients, **each** of said transform coefficients having **either** a value of zero or a value other than zero;a variable-length coding circuit for converting **transform coefficients** from said orthogonal

transform circuit into a variable-length code, for padding said variable-length code to a fixed-length code...
...said digital coding apparatus;said variable-length coding circuit including:a first logical table for **storing** , in corresponding relationship, combinations of the numbers of consecutive zero-valued transform coefficients and nonzero...

...in sequence transform coefficients from said orthogonal transform circuit, and for converting, based on said **first** logical table, a combination of the number of consecutive zero-valued transform coefficients and a nonzero- **valued transform coefficient** of said received transform coefficients, into a variable-length code;a second logical table for storing variable-length **codes and** code lengths thereof in **corresponding relationship ; a** code length calculation circuit for receiving a variable-length code from said coding circuit, and for calculating, based on **said second logical** table, a code length of said **received variable - length** code;a padding circuit for receiving a variable-length code from **said coding** circuit and a code length from said code length calculation circuit, and **for padding , based** on said received code length, said received variable-length code to a fixed-length code.

48/3,K/1 (Item 1 from file: 347)
DIALOG(R)File 347:JAPIO
(c) 2006 JPO & JAPIO. All rts. reserv.

05394461 **Image available**
SIGNAL **COMPRESSION** DEVICE

PUB. NO.: 09-009261 [JP 9009261 A]
PUBLISHED: January 10, 1997 (19970110)
INVENTOR(s): KITAMURA TAKUYA
APPLICANT(s): SONY CORP [000218] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 07-156313 [JP 95156313]
FILED: June 22, 1995 (19950622)

SIGNAL **COMPRESSION** DEVICE

ABSTRACT

PURPOSE: To shorten the code **length** on an **average** in entropy encoding ...

...CONSTITUTION: This device is provided with a blocking means 20 for blocking the **picture** element information of a source sample surface, a DCT circuit 30 for transforming blocked input data, a quantizer 40 for quantizing the DCT transformed data, a **VLC** circuit 60 for variable length encoding the quantized data and a measurement circuit 80 for...

... from the measurement circuit 80 so as to use the input sample data themselves as **compression** data instead of the variable length encoded data when an entropy encoded **variable length code** amount is larger than the data amount on the surface of a unit input sample...

48/3,K/2 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2006 The Thomson Corporation. All rts. reserv.

0013012925 - Drawing available
WPI ACC NO: 2003-091212/
XRPX Acc No: N2003-072157
MPEG **bit stream error detection method involves determining error detection constraint in generated block coefficients and accordingly transforming coefficient to generate pixel data**
Patent Assignee: LIN T (LINT-I); MOLLOY S (MOLL-I); REDROCK SEMICONDUCTOR LTD (REDR-N)
Inventor: LIN T; MOLLOY S
Patent Family (2 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	
US 20020141502	A1	20021003	US 2001681423	A	20010330	200308	B
US 6721362	B2	20040413	US 2001681423	A	20010330	200425	E

Priority Applications (no., kind, date): US 2001681423 A 20010330

Patent Details

Number	Kind	Lan	Pg	Dwg	Filing Notes
US 20020141502	A1	EN	15	7	

MPEG **bit stream error detection method involves determining error detection constraint in generated block coefficients and...**

Original Titles:
Constrained discrete-cosine-transform coefficients for better error detection in a corrupted **MPEG** -4 bitstreams...

...Constrained discrete-cosine-transform coefficients for better error detection in a corrupted **MPEG** -4 bitstreams

Alerting Abstract ...NOVELTY - Received **MPEG** bit stream is passed to extract a block data. **Variable length code** word in the extracted data, is decoded to generate block coefficients. When an error detection... ...USE - For detecting errors in motion **picture** experts group (**MPEG**) bitstream of high quality sound and video stored in computing device such as personal computer...

...DESCRIPTION OF DRAWINGS - The figure shows the flowchart explaining the **MPEG** bit stream error detection method.

Original Publication Data by Authority

Original Abstracts:
Error detection is added to a motion- **picture** -experts group (**MPEG**) decoder by checking each 8x8-pixel block for constraints. The constraints are added during **compression** by adjusting discrete cosine transform (DCT) coefficients in the block to meet a constraint. When...

...the last two non-zero coefficients have the same magnitude. The constraint is added during **compression** after quantization but before variable- **length** coding by **averaging** the magnitudes and using the average magnitude for the last two non-zero coefficients. This...

...Error detection is added to a motion- **picture** -experts group (**MPEG**) decoder by checking each 8x8-pixel block for constraints. The constraints are added during **compression** by adjusting discrete cosine transform (DCT) coefficients in the block to meet a constraint. When...

...the last two non-zero coefficients have the same magnitude. The constraint is added during **compression** after quantization but before variable- **length** coding by **averaging** the magnitudes and using the average magnitude for the last two non-zero coefficients. This...
Claims:
b 1 /b . A method for detecting errors in an motion- **picture** -experts group (**MPEG**) bitstream comprising: receiving a **MPEG** bitstream containing transmission errors; parsing the **MPEG** bitstream for a block within a macroblock; extracting block data for the block from the **MPEG** bitstream; decoding variable-length codewords in the block data to generate coefficients for the block...

48/3,K/3 (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX

0009774210 - Drawing available
WPI ACC NO: 2000-061812/
XRPX Acc No: N2000-048490
Variable length encoding apparatus for image **data** compression **-decompression system**
Patent Assignee: SAMSUNG ELECTRONICS CO LTD (SMSU)
Inventor: CHON B; JEON B; JEONG J; JUNG J; PARK J

Patent Family (2 patents, 2 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	
US 5999111	A	19991207	US 1995563018	A	19951127	200005	B
KR 139161	B1	19980515	KR 199431359	A	19941126	200014	E

Priority Applications (no., kind, date): KR 199431359 A 19941126

Patent Details

Number	Kind	Lan	Pg	Dwg	Filing Notes
US 5999111	A	EN	13	5	

Variable length encoding apparatus for image **data** compression **-decompression system**

Original Titles:
Variable length encoding/decoding apparatus using re-association of symbol-codeword for **variable length code** table.

Alerting Abstract ...are varied, according to a symbol received by an encoder. After varying symbol codeword, reassociated **variable length code** table is output. In the symbol codeword reassociated **variable length code** table, a symbol codeword assignment in the predefined **variable length code** table is reassociated....a symbol address assignment information and address counter value assignment information, based on a predefined **variable length code** table and generates a load control signal at each predetermined data unit. An encoder receives...

...and outputs codewords corresponding to input symbols using the assignment information to access the predefined **variable length code** table. An INDEPENDENT CLAIM is also included for variable length encoding method...

...USE - For **image** data **compression** -decompression system...

...ADVANTAGE - Improves data **compression** efficiency, even though global statistics corresponding to the predefined **variable length code** table and local statistics of the symbols/codewords which are actually variable-length-encoded and decoded, do not match each other. Shortens **average** code **length** .

Technology Focus
...predetermined updating data unit which comprises a macro block as defined in data structure of **MPEG** -2 standard.

Title Terms.../Index Terms/Additional Words: **IMAGE** ;

Original Publication Data by Authority

Original Abstracts:
A variable length encoding/decoding apparatus using symbol-codeword re-association of a **variable length code** table includes a re-associator for storing symbol-address assignment information, address-codeword assignment information...

...information according to the varied counter value due to the symbol identifying and outputting a **variable length code** table in which a symbol-codeword is re-associated to the encoder/decoder apparatus, and...

...the initialized counter values based on probabilities of symbol occurrences belonging to the pre-defined **variable length code** table and the information stored in the re-associator based on the pre-defined updating unit, and storing the symbol-codeword re-associated **variable length code** table every predetermined updating unit in the encoder/decoder. A data **compression** efficiency can be improved even though global statistics corresponding to the pre-defined **variable length code** table and local statistics of the symbols/codewords which are actually variable-length-encoded/decoded...

Claims:

...symbol-address assignment information and address-counter value assignment information based on a pre-defined **variable length code** table, and for generating a load control signal at each predetermined updating data unit; encoding...

...said symbol-address assignment information stored by the encoding means to access the pre-defined **variable length code** table; and means for storing the symbol-address assignment information and the address-counter value...

...a symbol received by said encoding means, and for outputting a symbol-codeword re-associated **variable length code** table, in which a symbol-codeword assignment in the pre-defined **variable length code** table is re-associated in accordance with results from varying the symbol-address assignment information...

48/3,K/4 (Item 3 from file: 350)

0007955255 - Drawing available
WPI ACC NO: 1997-045161/
XRPX Acc No: N1997-037504

Signal compressor for digital data input signals - uses input data sample rather than variable length coded data when coded data is found to be longer

Patent Assignee: SONY CORP (SONY)
Inventor: KITAMURA T

Patent Family (3 patents, 5 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	
EP 750427	A2	19961227	EP 1996304470	A	19960617	199705	B
JP 9009261	A	19970110	JP 1995156313	A	19950622	199712	E
US 5774594	A	19980630	US 1996670777	A	19960620	199833	E

Priority Applications (no., kind, date): JP 1995156313 A 19950622

Patent Details

Number	Kind	Lan	Pg	Dwg	Filing Notes
EP 750427	A2	EN	17	13	
Regional Designated States,Original: DE FR GB					
JP 9009261	A	JA	10		

Original Titles:

...Signal **compression** and/or expansion devices...

...Dispositif de **compression** et/ou decompression de signal...

...Signal **compression** device.

Alerting Abstract ...The signal compressor uses entropy coding to compress the data. When a **variable length code** content, after entropy coding, is greater than a data content of a unit input sample...

...ADVANTAGE - Improved transmission efficiency due to shorter **average** code **length** . Reduced deterioration in **image** quality.

Original Publication Data by Authority

Original Abstracts:
...transforms the blocks of input data, a quantizer (40) quantizes the DCT-treated data, a **VLC** circuit (60) subjects the quantized data to variable-length coding, and a measuring circuit (80...

...selected in accordance with an output from the measuring circuit (80) so that when the **variable - length code** content after entropy coding is greater than the data content of unit input sample surface...

...circuit transforms the blocks of input data, a quantizer quantizes the DCT-treated data, a **VLC** circuit subjects the quantized data to variable-length coding, and a measuring circuit measures the...

...is selected in accordance with an output from the measuring circuit so that when the **variable - length code** content after entropy coding is greater than the data content of unit input sample surface...
Claims:
1. A signal **compression** device utilizing entropy coding for compressing data obtained by subjecting pixel information of an original sample surface to blocking and orthogonal transformation, characterized in that when a **variable - length code** content after entropy coding is greater than a data content of unit input sample surface...

...A signal **compression** device for compressing **image** data, comprising: orthogonal transformation means for transforming input **image** data into orthogonally transformed data corresponding to said input **image** data; quantizing means for quantizing the orthogonally transformed data using a predetermined quantization step value...

...the determined value to a predetermined value that indicates a code length of said input **image** data, said measuring means including means for supplying data indicating whether the determined value is...

...variable-length coded data received from said second variable-length coding means or said input **image** data as output data in response to said measuring means.
?

51/3,K/1 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX

0013379195 - Drawing available
WPI ACC NO: 2003-468905/200344
Related WPI Acc No: 2003-442030
XRPX Acc No: N2003-373147
Variable length coding method for image **coding apparatus, involves selecting code table according to quantization parameter or variable length coding selection signal for assigning** variable length code
Patent Assignee: ABE K (ABEK-I); HAGAI M (HAGA-I); KADONO S (KADO-I); KONDO S (KOND-I); MATSUSHITA ELECTRIC IND CO LTD (MATU)
Inventor: ABE K; HAGAI M; KADONO S; KONDO S
Patent Family (6 patents, 100 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update
WO 2003044964	A1	20030530	WO 2002JP12232	A	20021122	200344 B
BR 200206628	A	20040225	BR 20026628	A	20021122	200416 E
			WO 2002JP12232	A	20021122	
AU 2002366142	A1	20030610	AU 2002366142	A	20021122	200419 E
EP 1453208	A1	20040901	EP 2002790698	A	20021122	200457 E
			WO 2002JP12232	A	20021122	
US 20050015248	A1	20050120	WO 2002JP12232	A	20021122	200507 E
			US 2004494753	A	20040505	
MX 2004004770	A1	20040801	WO 2002JP12232	A	20021122	200548 E
			MX 20044770	A	20040519	

Priority Applications (no., kind, date): JP 2001358197 A 20011122; JP 200299227 A 20020401

Patent Details

Number	Kind	Lan	Pg	Dwg	Filing Notes
WO 2003044964	A1	JA	138	36	

National Designated States,Original: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SC SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW
Regional Designated States,Original: AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SK SL SZ TR TZ UG ZM ZW

BR 200206628	A	PT	PCT Application WO 2002JP12232 Based on OPI patent WO 2003044964
AU 2002366142	A1	EN	Based on OPI patent WO 2003044964
EP 1453208	A1	EN	PCT Application WO 2002JP12232 Based on OPI patent WO 2003044964

Regional Designated States,Original: AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LI LU MC NL PT SE SK TR

US 20050015248	A1	EN	PCT Application WO 2002JP12232
MX 2004004770	A1	ES	PCT Application WO 2002JP12232 Based on OPI patent WO 2003044964

Variable length coding method for image **coding apparatus, involves selecting code table according to quantization parameter or variable length coding selection signal for assigning** variable length code

Alerting Abstract ...is selected according to quantization parameter or variable length coding selection signal (VlcSel) for assigning **variable length code** . ...USE - For coding **image** signal...

...Enables removing effectively the redundancy information present in the data to be processed. Thus, improves **compression** ratio of **image** signal ...

...DESCRIPTION OF DRAWINGS - The figure shows the block diagram of the **image** coding apparatus...

Title Terms.../Index Terms/Additional Words: **IMAGE** ;

Original Publication Data by Authority

Original Abstracts:
According to the present invention, an **image** coding apparatus (103) that encodes quantized coefficients corresponding to an **image** signal as target data to be processed is provided with a **run - length encoding** unit (RLE2) that assigns variable length codes to the quantized coefficients using code tables. The **run - length encoding** unit (RLE2) forms a second code table by optimizing a first code table to the...

...information included in the target data to be processed can be effectively eliminated, and the **compression** ratio for the **image** signal or the like can be further increased...

...According to the present invention, an **image** coding apparatus (b 103 /b) that encodes quantized coefficients corresponding to an **image** signal as target data to be processed is provided with a **run - length encoding** unit (RLE b 2 /b) that assigns variable length codes to the quantized coefficients using code tables. **The run - length** encoding unit (RLE b 2 /b) forms a second code table by optimizing a first code table...

...redundancy of information included in the target data to be processed can be effectively eliminated, **and** the compression ratio **for** the image signal or the like can be further increased...

... An image coding apparatus (103) for coding a quantization coefficient **of** an image signal as data to be processed includes a run length coder (RLE2) for **assigning a variable** length code to the quantization coefficient by using a coding table. According to a first...

...or the second code table is selected as a code table to be used for **assigning the variable** length code. Thus, it is possible to effectively remove the information redundancy present in the data to be processed and to **improve** the compression ratio **of** an image signal...

...L'invention concerne un appareil (103) de **codage** d'image permettant de coder un coefficient de quantification d'un **signal** d'image en tant que donnees a traiter, comprenant un codeur de longueur de plage...
...efficace la redondance d'information presente dans les donnees a traiter et d'ameliorer le **taux** de compression d'un **signal** d'image.
Claims:
...transforming a run-level pair comprising a run value that indicates the number of consecutive **zero** coefficients whose values are **zero** and a level value that indicates a value of a non- **zero** coefficient following the **zero** coefficients, into a code, by using plural code tables that indicate correspondences between numerical information...

...of transforming a run-level pair comprising a run value that indicates

the number of **consecutive** zero coefficients whose values **are** zero and a level value that indicates a value of a **non** -zero coefficient following **the** zero coefficients, into a code, by using plural code tables that indicate correspondences between numerical...

51/3,K/2 (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX

0012630086
WPI ACC NO: 2002-478881/
XRPX Acc No: N2002-378164
Digitized image **lossy** compression **method for embedded processor, involves storing new codeword lengths with words whose bit length is equal to largest word length**
Patent Assignee: BOSTROM A K (BOST-I)
Inventor: BOSTROM A K
Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update
US 20020044695	A1	20020418	US 2000202130	P	20000505	200251 B
			US 2001849751	A	20010504	

Priority Applications (no., kind, date): US 2000202130 P 20000505; US 2001849751 A 20010504

Patent Details

Number	Kind	Lan	Pg	Dwg	Filing Notes
US 20020044695	A1	EN	7	0	Related to Provisional US 2000202130

Digitized image **lossy** compression **method for embedded processor, involves storing new codeword lengths with words whose bit length is...**

Original Titles:
Method for wavelet-based **compression** of video **images**

Alerting Abstract USE - For lossy **compression** of digitized **image** for use with low end embedded processor...

Technology Focus
INDUSTRIAL STANDARDS - **Images** are compressed with **image** data of NTSC format.

Title Terms.../Index Terms/Additional Words: **IMAGE** ;

Original Publication Data by Authority

Original Abstracts:
A method for lossy **compression** of digitized **images** involves wavelet transformation, extension of **image** dimension factors with allocation to memory, and discrete wavelet transformation.
Claims:
b 1 /b . A method for lossy **compression** of digitized **images** , comprising the steps of, (a) wavelet transformation of the **image** , with smoothing and extending to reduce high frequency contents, said step including steps of (i...

...joining the first and last pixels in each row and in each column of the **image** , (ii) determining how many factors of two are present in each

dimension of the **image** , (iii) extending these dimensions until each has at has at least four factors of two present, (iv) allocating the memory needed to extend the **image** to the new dimensions, resulting in a memory buffer containing the **image** data augmented by a padding of uninitialized memory cells to the right and bottom of cells containing the **image** data, (v) joining the first and last pixels of each row and column by writing the linear interpolation function generated into the **image** extension padding supplied by step (iv), and (vi) performing a discrete wavelet transform on the extended **image** generated by steps (i) through (v), producing a quad-tree data structure which contains the wavelet transform of the **image** ; (b) quantization by conversion of the floating point coefficients, output by step (a)(i), into...

...quantization functions have been determined to be nearly optimal in rate vs. distortion for subsequent **compression** of most (c) **Run length encoding** (**RLE**) by the following steps, (i) Three run Length Encoders are assigned to vertically traverse the...

...the type of wavelet filter (Spec3.11) producing each said subband, and (iii) Mapping by **RLE** of quantized coefficients by a symbol table (Spec 3.31) to three sets of new coefficients, each drawn from statistically similar regions of the quad-tree, representing the data dn **zero run** lengths, whereby resulting output effects improved subsequent entropy **compression** ; (d) Huffman entropy coding of the **image** data output by step (c) into three sets of coded data by (i) Building a...

...data sets, (ii) Constructing a separate Huffman codebook for PDF (iii) Mapping the data to **variable length code** words using the codebooks built in step b. resulting in improved **compression** due to the similar distributions of the data sets within each of the three data...
?

```
File   2:INSPEC 1898-2006/Sep W4
         (c) 2006 Institution of Electrical Engineers
File   6:NTIS 1964-2006/Sep W4
         (c) 2006 NTIS, Intl Cpyrght All Rights Res
File   8:Ei Compendex(R) 1970-2006/Sep W4
         (c) 2006 Elsevier Eng.  Info. Inc.
File  34:SciSearch(R) Cited Ref Sci 1990-2006/Oct W1
         (c) 2006 The Thomson Corp
File  35:Dissertation Abs Online 1861-2006/Sep
         (c) 2006 ProQuest Info&Learning
File  56:Computer and Information Systems Abstracts 1966-2006/Sep
         (c) 2006 CSA.
File  57:Electronics & Communications Abstracts 1966-2006/Sep
         (c) 2006 CSA.
File  65:Inside Conferences 1993-2006/Oct 06
         (c) 2006 BLDSC all rts. reserv.
File  92:IHS Intl.Stds.& Specs. 1999/Nov
         (c) 1999 Information Handling Services
File  94:JICST-EPlus 1985-2006/Jul W1
         (c)2006 Japan Science and Tech Corp(JST)
File  95:TEME-Technology & Management 1989-2006/Oct W1
         (c) 2006 FIZ TECHNIK
File  99:Wilson Appl. Sci & Tech Abs 1983-2006/Jul
         (c) 2006 The HW Wilson Co.
File 144:Pascal 1973-2006/Sep W2
         (c) 2006 INIST/CNRS
File 239:Mathsci 1940-2006/Nov
         (c) 2006 American Mathematical Society
File 256:TecInfoSource 82-2006/Jan
         (c) 2006 Info.Sources Inc
File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec
         (c) 2006 The Thomson Corp
File 583:Gale Group Globalbase(TM) 1986-2002/Dec 13
         (c) 2002 The Gale Group
File 603:Newspaper Abstracts 1984-1988
         (c)2001 ProQuest Info&Learning
File 483:Newspaper Abs Daily 1986-2006/Oct 06
         (c) 2006 ProQuest Info&Learning
File 248:PIRA 1975-2006/Sep W3
         (c) 2006 Pira International

Set     Items   Description
S1     103422   (ESTIMAT? OR CALCULAT? OR COMPUT?)(3N)(SIZE OR LENGTH)
S2       3712   S1 AND (CODE OR CODING)
S3       3017   VARIABLE(3N)LENGTH()(CODE OR BLOCK??) OR VLC
S4      57772   HISTOGRAM??
S5      46003   BIN OR BINS
S6    2088031   PRODUCTS
S7    6401475   SIZE? OR DIMENSION?
S8     808445   ZERO
S9      67756   NONZERO
S10       381   RUN(N3)ZERO
S11         0   REPRESENTATIVE()LEVEL?.
S12     32722   AVERAG?(3N)(RUN OR LENGTH)
S13      1192   RLE OR RUN()LENGTH()ENCODING
S14   1801061   COEFFICIENT?
S15    602727   HUFFMAN OR LOSSLESS OR COMPRESSION
S16     27256   DCT OR DISCRETE()COSINE()TRANSFORM
S17      3452   AU=(KOSHIBA, O? OR OSAMOTO, A? OR YAMAUCHI, S? OR KOSHIBA -
             O? OR OSAMOTO A? OR YAMAUCHI S?)
S18       139   REPRESENTATIVE()LEVEL?
```

```
S19          0   S17 AND S2
S20          0   S17 AND S3
S21         39   S1 AND S3
S22          0   S21 AND S4 AND S5 AND S6
S23          1   S21 AND S4
S24          0   S21 AND S12
S25         12   S21 AND (S13 OR S15)
S26          3   S25 AND S14
S27          3   S26 NOT S23
S28          3   RD S27  (unique items)
S29        346   S3 AND S7
S30         13   S29 AND (S4 OR S5 OR S6)
S31         12   S30 NOT (S27 OR S23)
S32          6   RD S31  (unique items)
S33          3   S32 NOT (MEAT OR BLUBBER OR SEAL OR VERY()LONG()CHAIN OR C-
                 HEMISTRY OR FLUTING)
S34        173   S29 AND (S13 OR S14 OR S15)
S35          2   S34 AND (CODE?? OR BLOCK??) AND (S8 OR S9 OR S10)
S36          2   S35 NOT (S30 OR S27 OR S23)
S37          2   RD S36  (unique items)
S38          0   S34 AND S12
S39          0   S29 AND S12
S40          0   S29 AND S18
S41         46   S2 AND S12
S42         12   S41 AND (S4 OR S5 OR S13 OR S14 OR S15)
S43         12   S42 NOT (S35 OR S30 OR S27 OR S23)
S44         10   RD S43  (unique items)
S45          0   S17 AND (S4 OR S5)
```

23/3,K/1 (Item 1 from file: 94)
DIALOG(R)File 94:JICST-EPlus

00879689 JICST ACCESSION NUMBER: 89A0229213 FILE SEGMENT: JICST-E
A file structure for data archives on long-term patients.
OKADA MASAHIKO (1); YAKATA MINORU (1)
(1) Niigata Univ., School of Medicine
Iryo Johogaku(Japan Journal of Medical Informatics), 1989, VOL.9,NO.1, PAGE.13-20, FIG.7, TBL.2, REF.11
JOURNAL NUMBER: Y0510AAE ISSN NO: 0289-8055
UNIVERSAL DECIMAL CLASSIFICATION: 681.3.02:61
LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan
DOCUMENT TYPE: Journal
ARTICLE TYPE: Original paper
MEDIA TYPE: Printed Publication

ABSTRACT: In the previous paper, we proposed a method for storing variable-**length** records in a **computer** file. We have applied this method to a clinical data archival system, and have three...

...this method are the results of screening tests for heart disease in school children. A **histogram** of the number of blocks used for each record was first examined, and the performance...
...DESCRIPTORS: **variable length code** ;
?

28/3,K/1 (Item 1 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)

04102027 E.I. No: EIP95022595357
Title: Multi-resolution based algorithms for low bit-rate image coding
Author: Goh, Kwong H.; Soraghan, John J.; Durrani, Tariq S.
Corporate Source: Univ of Strathclyde, Glasgow, Scotl
Conference Title: Proceedings of the 1994 1st IEEE International Conference on Image Processing. Part 3 (of 3)
Conference Location: Austin, TX, USA Conference Date: 19941113-19941116
E.I. Conference No.: 42570
Source: IEEE International Conference on Image Processing v 3 1994. IEEE, Los Alamitos, CA, USA,94CH35708. p 285-289
Publication Year: 1994
CODEN: 001953
Language: English

...Abstract: codec uses a new efficient adaptive bit-plane run-length coding of the Wavelet Transform **coefficients** of images. The main merit of this coding scheme is its simplicity requiring no training...
Descriptors: *Algorithms; Image coding; Wavelet transforms; Estimation; Teleconferencing; Feedback control; Color image processing; Computer simulation; Image **compression** ; Image quality
Identifiers: Low bit rate; Image sequences; Image codec; Wavelet transform **coefficients** ; Motion **estimation** ; **Variable length code** tables; Adaptive bit plane run length codec

28/3,K/2 (Item 1 from file: 144)
DIALOG(R)File 144:Pascal

16824666 PASCAL No.: 04-0483455
Pel reconstruction on FPGA-augmented TriMedia
SIMA Mihai; COTOFANA Sorin D; VASSILIADIS Stamatis; VAN EIJNDHOVEN Jos T J; VISSERS Kees A
Department of Electrical and Computer Engineering, University of Victoria , Victoria, BC V8W 3P6, Canada; Faculty of Electrical Engineering, Mathematics and Computer Science, Delft University of Technology, 2628 CD Delft, Netherlands; Department of Information and Software Technology, Philips Research Laboratories, 5656 AA Eindhoven, Netherlands; Department of Electrical Engineering and Computer Sciences, University of California,, Berkeley, CA 94720-1774, United States
Journal: IEEE transactions on very large scale integration (VLSI) systems , 2004, 12 (6) 622-635
Language: English

...can decode two symbols per call (VLD-2), an inverse quantizer that can dequantize four **coefficients** per call (IQ-4), and an 1-D IDCT (1-D IDCT). The most important...

...English Descriptors: Entropy codes; Decoding; Quantization; Discrete cosine transforms; Inverse transformation; Two dimensional model; Performance evaluation; Data **compression** ; **Variable length code** ; Implementation; **Computing** ; Processor; Instruction; Experimental study; Inverse quantization; MPEG decoding

...French Descriptors: assistee; Code entropie; Decodage; Quantification; Transformation cosinus discrete; Transformation inverse; Modele 2 dimensions; Evaluation performance; **Compression** donnee; Code longueur variable; Implementation; Calcul automatique; Processeur; Instruction; Etude experimentale; Quantification inverse; Decodage MPEG

28/3,K/3 (Item 2 from file: 144)
DIALOG(R)File 144:Pascal

15347847 PASCAL No.: 02-0034562
Low-complexity and low-memory entropy coder for image compression
DEBIN ZHAO; CHAN Y K; WEN GAO
Department of Computer Science, Harbin Institute of Technology, Harbin 150001, China; Department of Computer Science, City University of Hong Kong , Hong Kong
Journal: IEEE transactions on circuits and systems for video technology, 2001, 11 (10) 1140-1145
Language: English

Low-complexity and low-memory entropy coder for image compression
... this paper, a low-complexity and low-memory entropy coder (LLEC) is proposed for image **compression** . The two key elements in the LLEC are zerotree coding and Golomb-Rice (G-R) codes. Zerotree coding exploits the zerotree structure of transformed **coefficients** for higher **compression** efficiency. G-R codes are used to code the remaining **coefficients** in a variable-length codes/variable-length integer manner resulting in JPEG similar computational complexity. The proposed LLEC does not use any **Huffman** table, significant/insignificant list, or arithmetic coding, and therefore its memory requirement is minimized with respect to any known image entropy coder. In terms of **compression** efficiency, the experimental results show that discrete cosine transform (DCT)- and discrete wavelet transform (DWT...

English Descriptors: Image processing; Image **compression** ; Image coding; Performance evaluation; **Variable length code** ; **Computational** complexity; Wavelet transformation; Discrete cosine transforms; Entropy; Signal processing; Parallel processing; Algorithm

French Descriptors: Traitement image; **Compression** image; Codage image; Evaluation performance; Code longueur variable; Complexite calcul; Transformation ondelette; Transformation cosinus discrete...
?
?

33/3,K/1 (Item 1 from file: 2)
DIALOG(R)File 2:INSPEC

09108298 INSPEC Abstract Number: B2004-10-6120B-261, C2004-10-6130-050
Title: Length-limited variable-to-variable length codes for high-performance entropy coding
Author(s): Senecal, J.; Duchaineau, M.; Joy, K.I.
Author Affiliation: Inst. for Sci. Comput. Res., Livermore, CA, USA
Conference Title: Proceedings. DCC 2004. Data Compression Conference p.389-98
Editor(s): Storer, J.A.; Cohn, M.
Publisher: IEEE Comput. Soc, Los Alamitos, CA, USA
Publication Date: 2004 Country of Publication: USA xiii+579 pp.
ISBN: 0 7695 2082 0 Material Identity Number: XX-2004-00888
U.S. Copyright Clearance Center Code: 1068-0314/2004/$20.00
Conference Title: Proceedings. DCC 2004. Data Compression Conference
Conference Sponsor: Brandeis Univ
Conference Date: 23-25 March 2004 Conference Location: Snowbird, UT, USA
Language: English
Subfile: B C

...Abstract: coders for binary messages utilizing only bit shifts and table lookups. To limit code table **size** the proposed code lengths is limited with a type of **variable** -to- **variable** (VV) **length code** created from source string merging. This is referred to as "merged codes". With merged codes...

... case inefficiency of 0.4%, relative to the Shannon entropy. Using a hybrid Golomb-VV **bin** coder the compression ratio that is competitive with other state-of-the-art coders, at...
...Identifiers: **variable** -to- **variable length code** ; ...

...hybrid Golomb-W **bin** coder

33/3,K/2 (Item 2 from file: 2)
DIALOG(R)File 2:INSPEC

06033948 INSPEC Abstract Number: B9510-6220M-004, C9510-5260B-221
Title: MPEG-1 low-cost encoder solution
Author(s): Gruger, K.; Schimmeister, F.; Filor, L.; Von Reventlow, C.; Schneider, U.; Muller, G.; Sefzik, N.; Fiedrich, S.
Author Affiliation: SICAN GmbH, Hannover, Germany
Journal: Proceedings of the SPIE - The International Society for Optical Engineering Conference Title: Proc. SPIE - Int. Soc. Opt. Eng. (USA) vol.2451 p.41-51
Publication Date: 1995 Country of Publication: USA
CODEN: PSISDG ISSN: 0277-786X
U.S. Copyright Clearance Center Code: 0 8194 1802 1/95/$6.00
Conference Title: Advanced Image and Video Communications and Storage Technologies
Conference Sponsor: SPIE: Eur. Opt. Soc
Conference Date: 20-23 March 1995 Conference Location: Amsterdam, Netherlands
Language: English
Subfile: B C

...Abstract: stream has been developed. The required computational power for motion estimation and DCT/IDCT, memory **size** and memory bandwidth have been the main challenges. The design uses fast-page-mode memory...

... a motion estimation unit, a motion compensation unit, a DCT unit, a quantization control, a **VLC** unit and a bus interface. For using the available memory bandwidth by the processing tasks...

... appropriate multiplexing, only one multiplier is required for: DCT, quantization, inverse quantization and IDCT. The **VLC** unit generates the video-stream up to the video sequence layer and is directly coupled...

... small requirements for DRAM circuits, the developed solution can be applied to low-cost encoding **products** for consumer electronics.
...Identifiers: **VLC** unit

33/3,K/3 (Item 1 from file: 144)
DIALOG(R)File 144:Pascal

13926993 PASCAL No.: 99-0109079
Design considerations for the ALDC cores : Papers on data compression in ASIC cores
SLATTERY M J; KAMPF F A
IBM Microelectronics Division, Burlington facility, Essex Junction, Vermont 05452, United States
Journal: IBM journal of research and development, 1998, 42 (6) 747-752
Language: English

The IBM adaptive lossless data compression (ALDC) family of **products** uses a derivative of Lempel-Ziv encoding to compress data. Several variables affect the compression performance of the ALDC algorithm: data content, history **size** , and data extent. As ALDC compression is integrated into different applications, restrictions are placed upon...

English Descriptors: Data compression; Signal processing; Adaptive coding; Performance evaluation; Data structure; **Variable length code** ; Data storage; Hard disk; VLSI circuit
?

37/3,K/1 (Item 1 from file: 2)
DIALOG(R)File 2:INSPEC

07845772 INSPEC Abstract Number: B2001-03-6135C-113, C2001-03-5260D-050
Title: A memory-efficient VLC decoder architecture for MPEG-2 application
Author(s): Kyeong-Yuk Min; Jong-Wha Chong
Author Affiliation: Hanyang Univ., Seoul, South Korea
Conference Title: 2000 IEEE Workshop on SiGNAL PROCESSING SYSTEMS. SiPS 2000. Design and Implementation (Cat. No.00TH8528) p.43-9
Editor(s): Bayoumi, M.A.; Friedman, E.
Publisher: IEEE, Piscataway, NJ, USA
Publication Date: 2000 Country of Publication: USA xv+836 pp.
ISBN: 0 7803 6488 0 Material Identity Number: XX-2000-02454
U.S. Copyright Clearance Center Code: 0 7803 6488 0/2000/$10.00
Conference Title: 2000 IEEE Workshop on SiGNAL PROCESSING SYSTEMS. SiPS 2000. Design and Implementation
Conference Sponsor: IEEE Signal Process. Soc.; IEEE Circuits & Syst. Soc
Conference Date: 11-13 Oct. 2000 Conference Location: Lafayette, LA, USA
Language: English
Subfile: B C

Title: A memory-efficient VLC decoder architecture for MPEG-2 application
Abstract: Video data **compression** is a major key technology in the field of multimedia applications. Variable-length coding is the most popular data **compression** technique which has been used in many data **compression** standards, such as JPEG, MPEG and image data **compression** standards, etc. We present a memory-efficient **VLC** decoder architecture for MPEG-2 application which can achieve small memory space and higher throughput. To reduce the memory **size** , we propose a new grouping, remainder generation method and merged lookup table (LUT) for variable length decoders (VLDs). In the MPEG-2, the discrete cosine transform (DCT) **coefficient** table **zero** and one are mapped onto one memory whose space requirement has been minimized by using efficient memory mapping strategy. The proposed memory **size** is only 256 words in spite of mapping two DCT **coefficient** tables.
Descriptors: **code** standards...

...data **compression** ; ...

...variable length **codes** ;
Identifiers: memory-efficient **VLC** decoder architecture...

...video data **compression** ; ...
...data **compression** standards...

...image data **compression** standards...

...memory **size** ; ...

...DCT **coefficient** tables

37/3,K/2 (Item 1 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)

05099741 E.I. No: EIP98084345526

Title: Efficient coding of DCT coefficients **by joint position-dependent encoding**

Author: Reed, Eric C.; Lim, Jae S.

Corporate Source: Massachusetts Inst of Technology, Cambridge, MA, USA

Conference Title: Proceedings of the 1998 IEEE International Conference on Acoustics, Speech and Signal Processing, ICASSP. Part 5 (of 6)

Conference Location: Seattle, WA, USA Conference Date: 19980512-19980515

E.I. Conference No.: 48801

Source: ICASSP, IEEE International Conference on Acoustics, Speech and Signal Processing - Proceedings v 5 1998. IEEE, Piscataway, NJ, USA,98CH36181. p 2817-2820

Publication Year: 1998

CODEN: IPRODJ ISSN: 0736-7791

Language: English

Title: Efficient coding of DCT coefficients **by joint position-dependent encoding**

...Abstract: of the bit rate is used to encode the location and amplitude information of the **nonzero** quantized DCT **coefficients** . Therefore efficient encoding of the DCT **coefficients** is extremely important. In this paper we describe the Joint Position-Dependent Encoding (PDE) approach to encode the DCT **coefficients** . Joint PDE exploits the variations in statistical properties of the runlengths and amplitudes as a...

...of position by introducing a set of 2-D codebooks in which each quantized DCT **coefficient** is assigned to one codebook in the set based on its location. Utilizing an MPEG-2 **codec** , we compare the bit rates using the joint PDE variable length **codes** (**VLC** 's) with the bit rates produced by the MPEG-2 **VLC** 's. We also examine how performance is affected by the number of codebooks. (Author abstract...

Descriptors: *Image coding; Cosine transforms; Image enhancement; Video signal processing; Bit error rate; Signal encoding; Two **dimensional** ; Statistical methods

Identifiers: Discrete cosine transforms; Joint position dependent encoding; Statistical properties; Codebook; Variables length **codes** ?

44/3,K/1 (Item 1 from file: 2)
DIALOG(R)File 2:INSPEC

08756756 INSPEC Abstract Number: B2003-11-6250F-248
Title: A new scheme for adjusting the estimated average length **of channel**
Author(s): Ma Zhang-yong; Zhao Chun-ming; You Xiao-hu
Author Affiliation: Nat. Mobile Commun. Reaserch Lab, Southeast Univ., Nanjing, China
Journal: Journal of Applied Sciences vol.21, no.1 p.49-52
Publisher: Editorial Committee of J. Applied Sciences,
Publication Date: March 2003 Country of Publication: China
CODEN: YKXUD4 ISSN: 0255-8297
SICI: 0255-8297(200303)21:1L.49:SAEA;1-T
Material Identity Number: B487-2003-001
Language: Chinese
Subfile: B

Title: A new scheme for adjusting the estimated average length **of channel**
Abstract: The author proposes that the channel **coefficient** of the effective arriving path can be estimated with a Rake coherent receiver. By calculating the level cross rate (LCR) of the envelope, the Doppler-shift is **estimated** . The observation **length** is then adjusted dynamically with the help of the connection between the Doppler-shift and...
...Descriptors: **code** division multiple access
Identifiers: **estimated average length** ; ...

...channel **coefficient** ; ...

... **code** division multiple access

44/3,K/2 (Item 2 from file: 2)
DIALOG(R)File 2:INSPEC

06720552 INSPEC Abstract Number: B9711-6120B-123
Title: A consideration generation of a compact code **for extended binary memoryless sources with low entropy**
Author(s): Hasegawa, M.; Kato, S.; Yamada, Y.
Author Affiliation: Fac. of Eng., Utsunomiya Univ., Japan
Journal: Transactions of the Institute of Electronics, Information and Communication Engineers A vol.J80-A, no.9 p.1483-9
Publisher: Inst. Electron. Inf. & Commun. Eng,
Publication Date: Sept. 1997 Country of Publication: Japan
CODEN: DJTAER ISSN: 0913-5707
SICI: 0913-5707(199709)J80A:9L.1483:CGCC;1-J
Material Identity Number: K838-97010
Language: Japanese
Subfile: B

Title: A consideration generation of a compact code **for extended binary memoryless sources with low entropy**
Abstract: We propose an easy method to generate a compact **code** for an extended binary memoryless source in which symbol probabilities deviate greatly. In n-th...

... called a low entropy source and there are no re-orderings for message reduction in **Huffman** algorithm. In this paper, we reveal that the **code** lengths and their numbers, **average code length** and maximum **code length** are easily **calculated** by utilizing these characteristics in the above case.
...Descriptors: **Huffman** codes
Identifiers: compact **code** ; ...

... **Huffman** algorithm...

... **average code length** ; ...

...maximum **code** length

44/3,K/3 (Item 3 from file: 2)
DIALOG(R)File 2:INSPEC

01936612 INSPEC Abstract Number: B76029464, C76019038
Title: Complexity of acceptors for prefix codes
Author(s): Brown, D.J.; Elias, P.
Author Affiliation: Dept. of Electrical Engng., MIT, Cambridge, MA, USA
Journal: IEEE Transactions on Information Theory vol.IT-22, no.3 p. 357-9
Publication Date: May 1976 Country of Publication: USA
CODEN: IETTAW ISSN: 0018-9448
Language: English
Subfile: B C

Abstract: For a given finite set of messages and their assigned probabilities, **Huffman** 's procedure gives a method of **computing** a **length** set (a set of codeword lengths) that is optimal in the sense that the **average** word **length** is minimized. Corresponding to a particular length set, however, there may be more than one **code** . Let L(n) consist of all length sets with largest term n, and, for any...

44/3,K/4 (Item 4 from file: 2)
DIALOG(R)File 2:INSPEC

01509582 INSPEC Abstract Number: C73011317
Title: Compact digital coding **of electrocardiographic data**
Author(s): Cox, J.R., Jr.; Ripley, K.L.
Author Affiliation: Washington Univ., St. Louis, MO, USA
Conference Title: Proceedings of the 6th Hawaii International Conference on Systems Sciences p.333-6
Editor(s): Lew, A.
Publisher: Western Periodicals, North Hollywood, CA, USA
Publication Date: 1973 Country of Publication: USA xx+533 pp.
Conference Sponsor: Univ. Hawaii; US Army Res. Office; IEEE; et al
Conference Date: 9-11 Jan. 1973 Conference Location: Honolulu, HI, USA
Language: English
Subfile: C

Title: Compact digital coding **of electrocardiographic data**
Abstract: A modified **Huffman coding** technique has been applied to electrocardiographic (ECG) data for efficient digital storage and transmission. The...

... at 250 samples/s, and a second difference obtained which in turn is converted into **code** words of variable length. The source words are partitioned into a frequent and an infrequent set. **Huffman coding** of the frequent source words leads to a **code** table of moderate size. Infrequent source words outside the **code** table are encoded by a simple rule yielding **code** words of fixed **length** . Bounds on average **code** word **length** are **calculated** and shown to be similar to the bounds given by the Shannon source **coding** theorem for efficient uniquely decodable codes.
Identifiers: compact digital **coding** ; ...

...modified **Huffman coding** technique

44/3,K/5 (Item 1 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

05391296 Genuine Article#: VV395 No. References: 8
Title: PREFIX CODES - EQUIPROBABLE WORDS, UNEQUAL LETTER COSTS
Author(s): GOLIN MJ; YOUNG N
Corporate Source: HONG KONG UNIV SCI & TECHNOL,CLEAR WATER BAY/KOWLOON//HONG KONG/; UNIV MARYLAND,UMIACS/COLLEGE PK//MD/20742
Journal: SIAM JOURNAL ON COMPUTING, 1996, V25, N6 (DEC), P1281-1292
ISSN: 0097-5397
Language: ENGLISH Document Type: ARTICLE (Abstract Available)

Abstract: We consider the following Variant of **Huffman coding** in which the costs of the letters, rather than the probabilities of the words, are nonuniform: ''Given an alphabet of r letters of nonuniform **length** , find a minimum- **average - length** prefix-free set of n codewords over the alphabet''; equivalently, ''Find an optimal r-ary...
Research Fronts: 94-0378 001 (VERB ACQUISITION; PARASITIC GAPS; PROGRAM-**SIZE** RESTRICTIONS IN **COMPUTATIONAL** LEARNING)

44/3,K/6 (Item 2 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

05213177 Genuine Article#: VH478 No. References: 12
Title: DIFFERENTIAL BLOCK CODING **OF BILEVEL IMAGES**
Author(s): ROBERTSON GR; ABURDENE MF; KOZICK RJ
Corporate Source: HARRIS RF COMMUN/ROCHESTER//NY/14610; BUCKNELL UNIV,DEPT ELECT ENGN/LEWISBURG//PA/17837
Journal: IEEE TRANSACTIONS ON IMAGE PROCESSING, 1996, V5, N9 (SEP), P 1368-1370
ISSN: 1057-7149
Language: ENGLISH Document Type: ARTICLE (Abstract Available)

Title: DIFFERENTIAL BLOCK CODING **OF BILEVEL IMAGES**
...Abstract: simple one-dimensional (1-D) differencing operation is applied to bilevel images prior to block **coding** to produce a sparse binary image that can be encoded efficiently using any of a...

...The difference image ran be encoded more efficiently than the original bilevel image whenever the **average run length** of black pixels in the original image is greater than two. **Compression** is achieved because the correlation between adjacent pixels is reduced compared with the original image. The encoding/decoding operations are described

and **compression** performance is presented for a set of standard bilevel images.
Research Fronts: 94-0378 001 (VERB ACQUISITION; PARASITIC GAPS; PROGRAM-**SIZE** RESTRICTIONS IN **COMPUTATIONAL** LEARNING)
94-0623 001 (TIME-FREQUENCY DISTRIBUTIONS; DOPPLER SIGNALS; TREE-STRUCTURED VECTOR QUANTIZATION; SPEECH **CODING** ; ADAPTIVE KERNEL DESIGN; **COMPRESSION** OF DIGITAL IMAGES)

44/3,K/7 (Item 3 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

04678977 Genuine Article#: UA147 No. References: 34
Title: ASYMPTOTIC-DISTRIBUTION OF THE ERRORS IN SCALAR AND VECTOR QUANTIZERS
Author(s): LEE DH; NEUHOFF DL
Corporate Source: PHILIPS SEMICOND,PROD CONCEPT & APPLICAT LAB/SUNNYVALE//CA/94088; UNIV MICHIGAN,DEPT ELECT ENGN & COMP SCI/ANN ARBOR//MI/48109
Journal: IEEE TRANSACTIONS ON INFORMATION THEORY, 1996, V42, N2 (MAR), P 446-460
ISSN: 0018-9448
Language: ENGLISH Document Type: ARTICLE (Abstract Available)

Abstract: High-rate (or asymptotic) quantization theory has found formulas for the **average** squared **length** (more generally, the qth moment of the length) of the error produced by various scalar...

...one to learn about the point density and cell shapes of a quantizer from a **histogram** of quantization error lengths, **Histograms** of the error lengths in simulations agree well with the derived formulas, Also presented are...
Research Fronts: 94-0623 002 (TIME-FREQUENCY DISTRIBUTIONS; DOPPLER SIGNALS; TREE-STRUCTURED VECTOR QUANTIZATION; SPEECH **CODING** ; ADAPTIVE KERNEL DESIGN; **COMPRESSION** OF DIGITAL IMAGES)
94-0378 001 (VERB ACQUISITION; PARASITIC GAPS; PROGRAM- **SIZE** RESTRICTIONS IN **COMPUTATIONAL** LEARNING)

44/3,K/8 (Item 4 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

04543742 Genuine Article#: TR238 No. References: 10
Title: MORE ON THE ERROR RECOVERY FOR VARIABLE-LENGTH CODES
Author(s): SWASZEK PF; DICICCO P
Corporate Source: UNIV RHODE ISL,DEPT ELECT & COMP ENGN/KINGSTON//RI/02881
Journal: IEEE TRANSACTIONS ON INFORMATION THEORY, 1995, V41, N6 (NOV), P 2064-2071
ISSN: 0018-9448
Language: ENGLISH Document Type: LETTER (Abstract Available)

Abstract: Variable-length codes (e.g., **Huffman** codes) are commonly employed to minimize the **average** codeword **length** for noiseless encoding of discrete sources, Upon transmission over noisy channels, conflicting views note that...
Research Fronts: 94-0378 001 (VERB ACQUISITION; PARASITIC GAPS; PROGRAM-**SIZE** RESTRICTIONS IN **COMPUTATIONAL** LEARNING)

44/3,K/9 (Item 1 from file: 56)
DIALOG(R)File 56:Computer and Information Systems Abstracts

0000473297 IP ACCESSION NO: 200609-51-067956
Complexity of acceptors for prefix codes (Corresp.)

Elias, P

IEEE Transactions on Information Theory, v 22, n 3, p 357-359, May 1976
PUBLICATION DATE: 1976

PUBLISHER: Institute of Electrical and Electronics Engineers, Inc., 445 Hoes Ln, Piscataway, NJ, 08854-1331
COUNTRY OF PUBLICATION: USA
PUBLISHER URL: http://ieee.org
PUBLISHER EMAIL: inspec@ieee.org

DOCUMENT TYPE: Journal Article
RECORD TYPE: Abstract
LANGUAGE: English
ISSN: 0018-9448
FILE SEGMENT: Computer & Information Systems Abstracts

ABSTRACT:
For a given finite set of messages and their assigned probabilities, **Huffman** 's procedure gives a method of **computing** a **length** set (a set of codeword lengths) that is optimal in the sense that the **average** word **length** is minimized. Corresponding to a particular length set, however, there may be more than one **code** . LetL(n)consist of all length sets with largest termn, and, for anyell in L...

44/3,K/10 (Item 1 from file: 239)
DIALOG(R)File 239:Mathsci

03675175 MR 2005e#94076
Fast codes for large alphabets.
Ryabko, Boris (Siberian State University of Telecommunications and Informatics, 630008 Novosibirsk, Russia)
Astola, Jaakko (Department of Mathematics, Tampere University of Technology, 33101 Tampere, Finland)
Egiazarian, Karen (Department of Mathematics, Tampere University of Technology, 33101 Tampere, Finland)
Corporate Source Codes: RS-SUTI; FIN-TUT; FIN-TUT
Commun. Inf. Syst.
Communications in Information and Systems, 2003, 3, no. 2, 139--151. ISSN: 1526-7555
Language: English Summary Language: English
Subfile: MR (Mathematical Reviews) AMS
Abstract Length: SHORT (6 lines)
Reviewer: Chlebus, Bogdan S. (1-COD-CE)

Lossless compression is considered in the case of large source alphabets. A heuristic is proposed to trade the **average** codeword **length** for speed of decoding. The proposed approach works by grouping letters of similar frequency to be encoded by words of equal **length** . Quantitative **estimates** on the increase of redundancy are given.

Descriptors: *94A29 -Information and communication, circuits-Communication, information-Source **coding** (See also 68P30) ...; programs in a specific mathematical area, see Section --04 in that area)-Theory of data- **Coding** and information theory (compaction, **compression** , models of communication, encoding schemes, etc.) (See also 94Axx)
?